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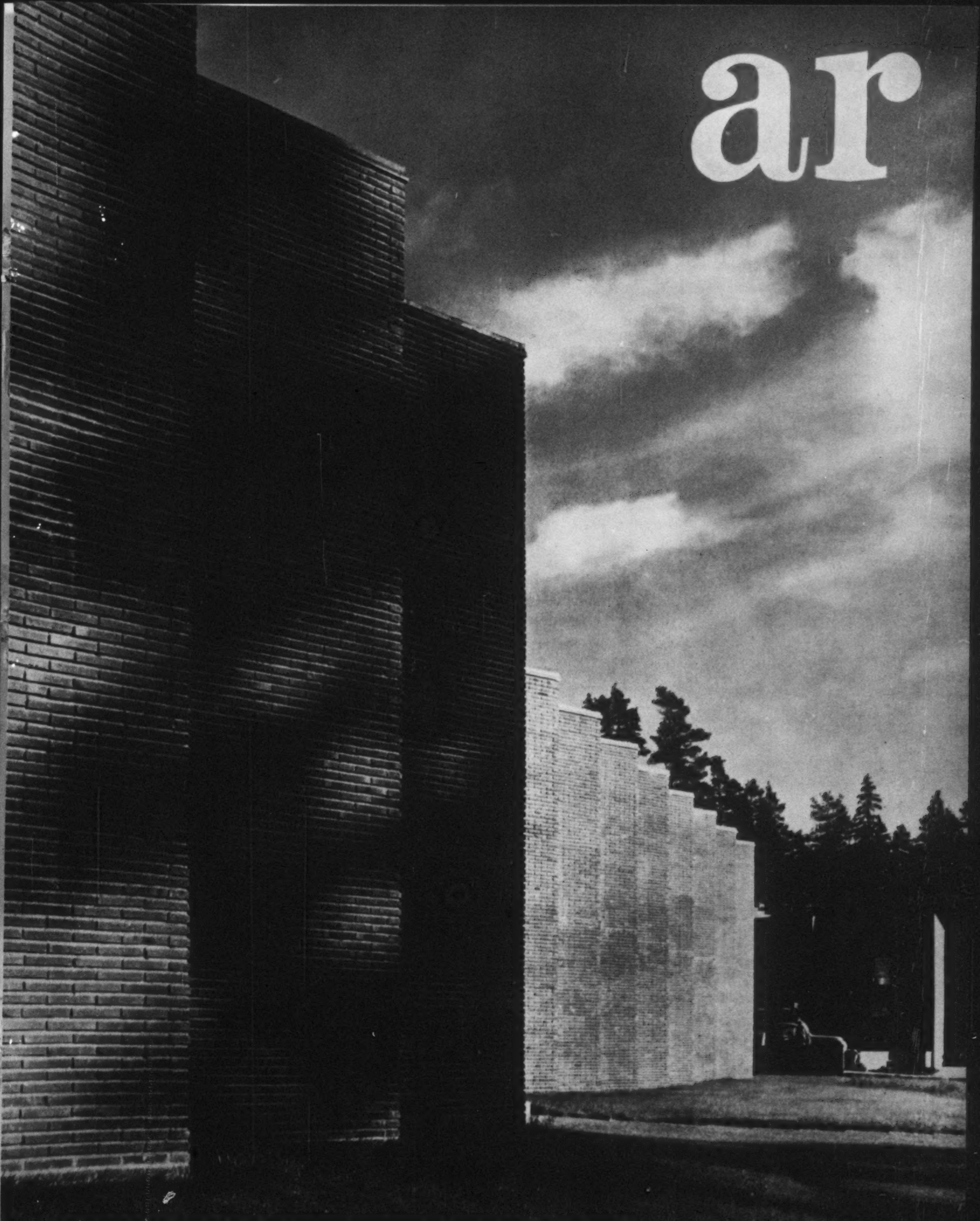
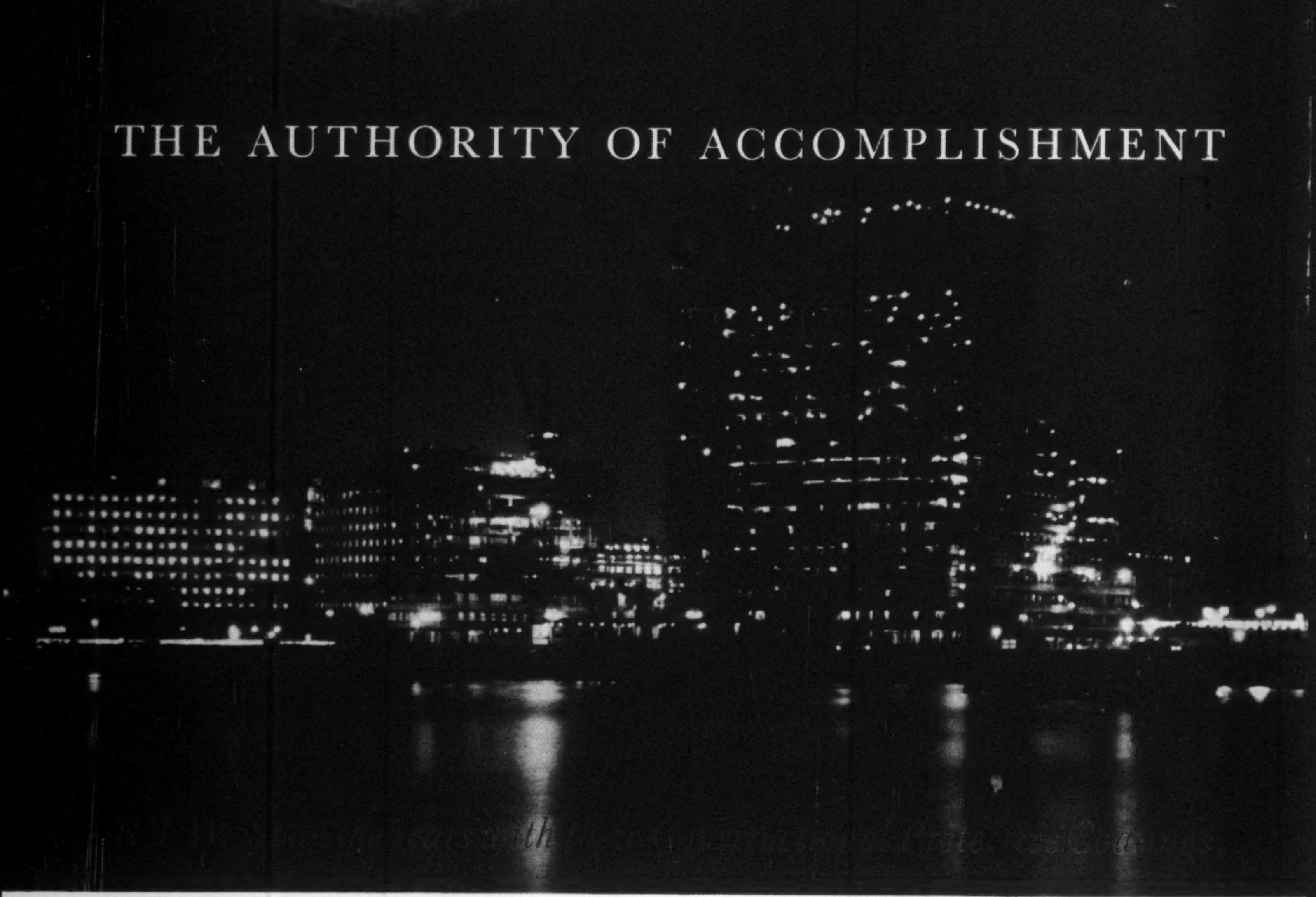


THE ARCHITECTURAL REVIEW VOLUME CXXVII NUMBER 760 JUNE 1960 FIVE SHILLINGS



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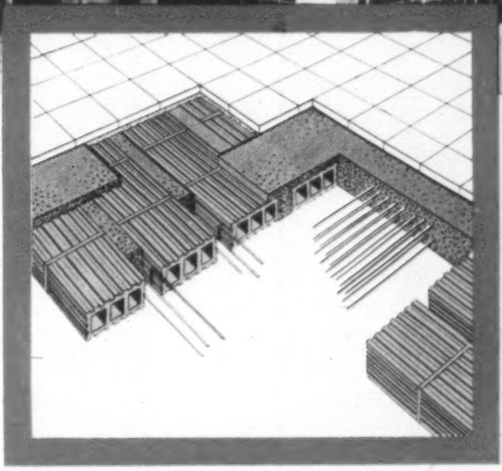

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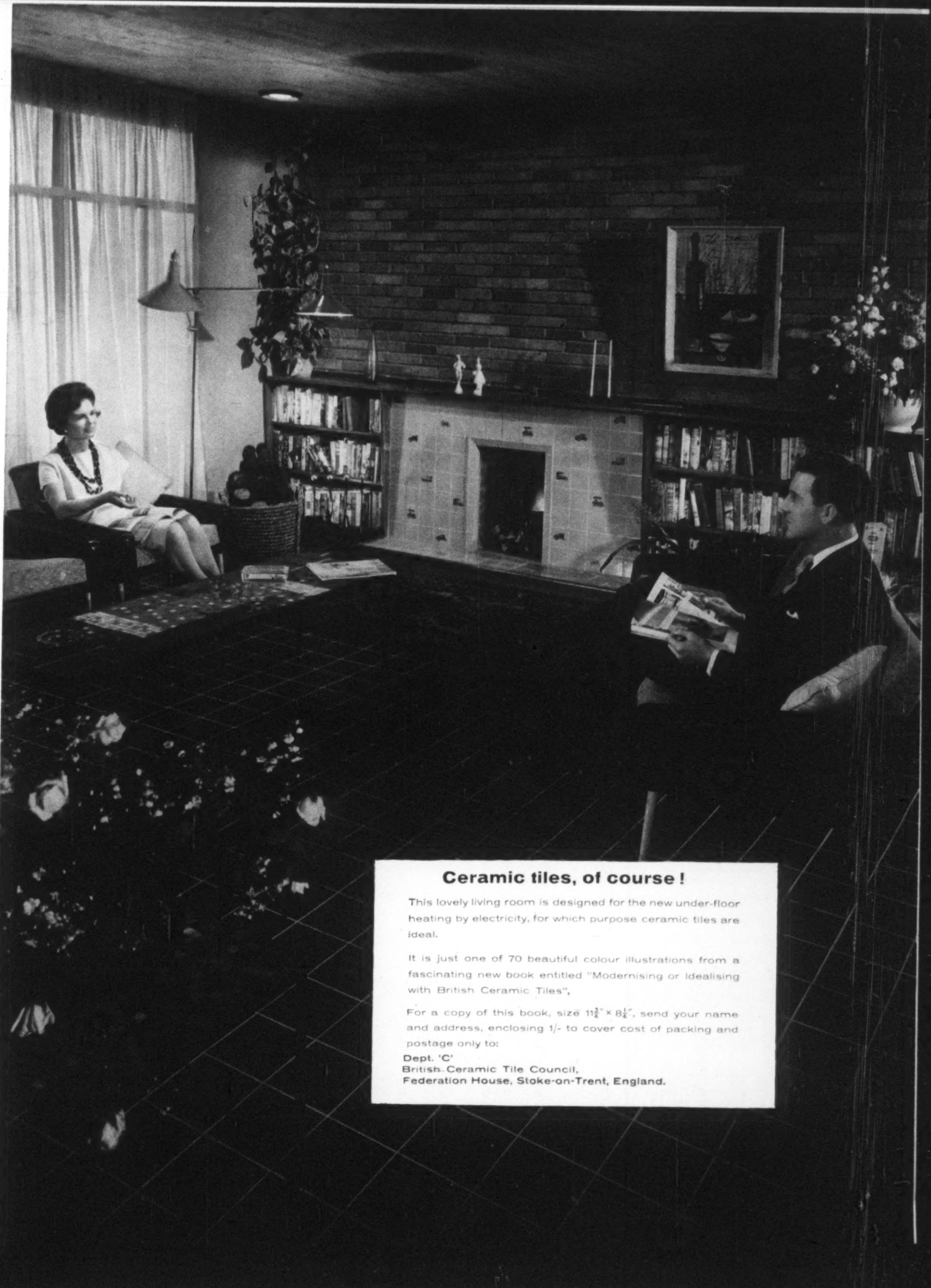

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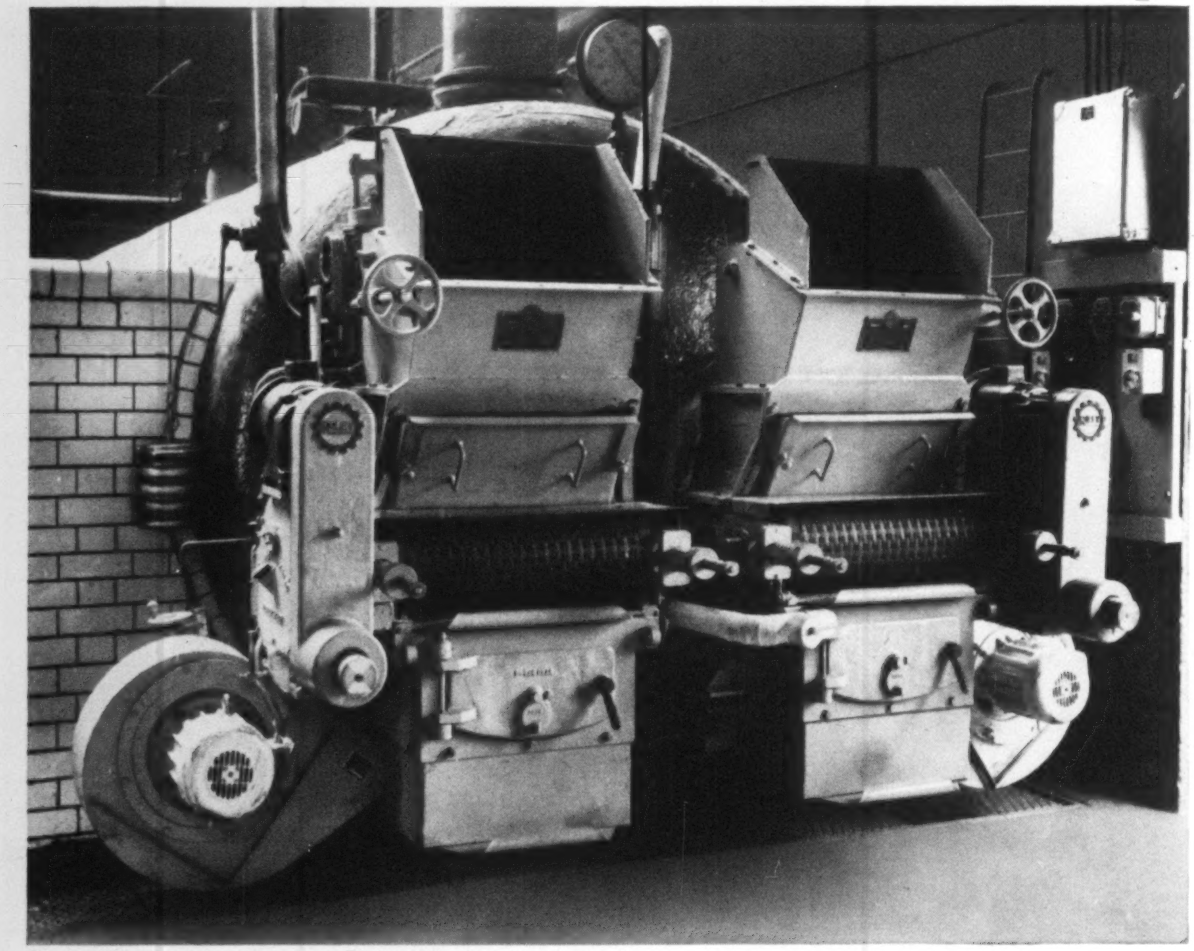

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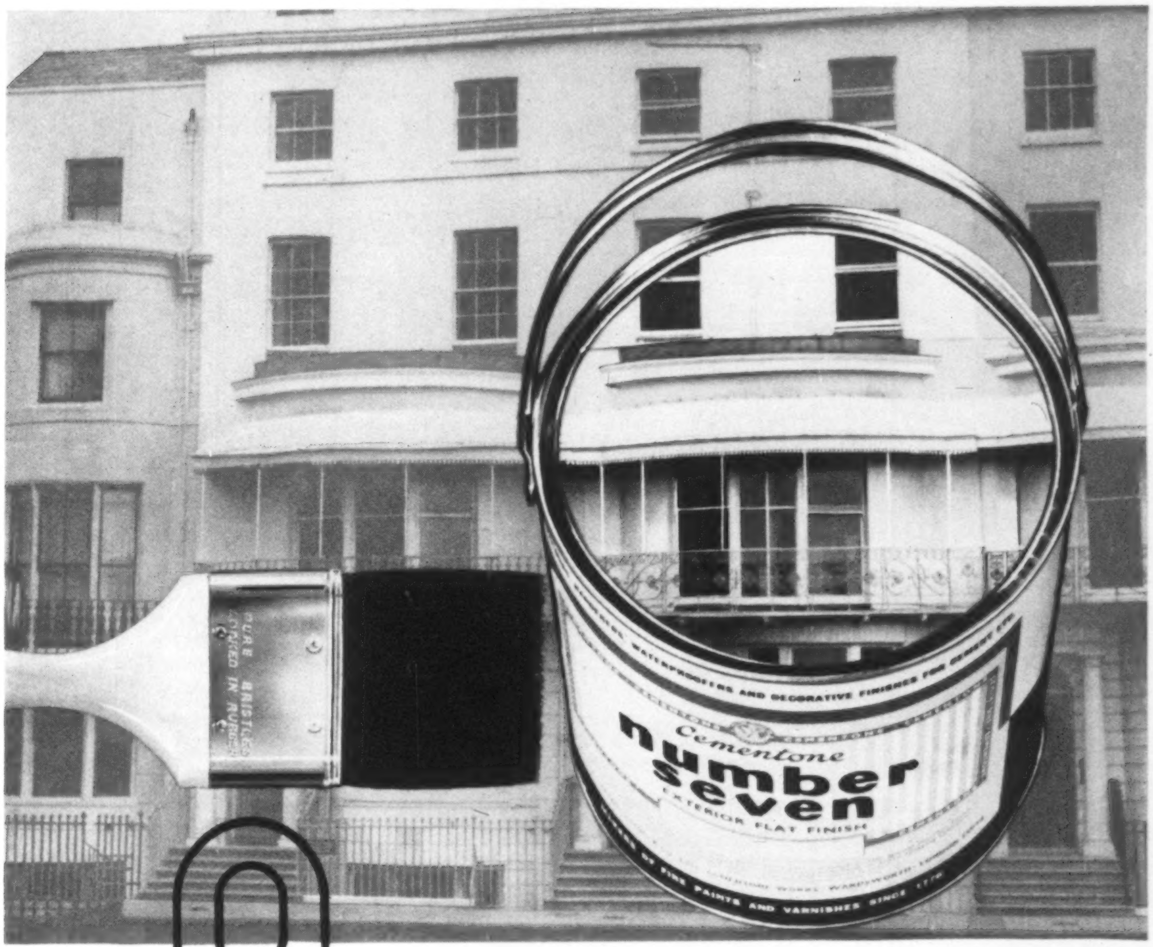
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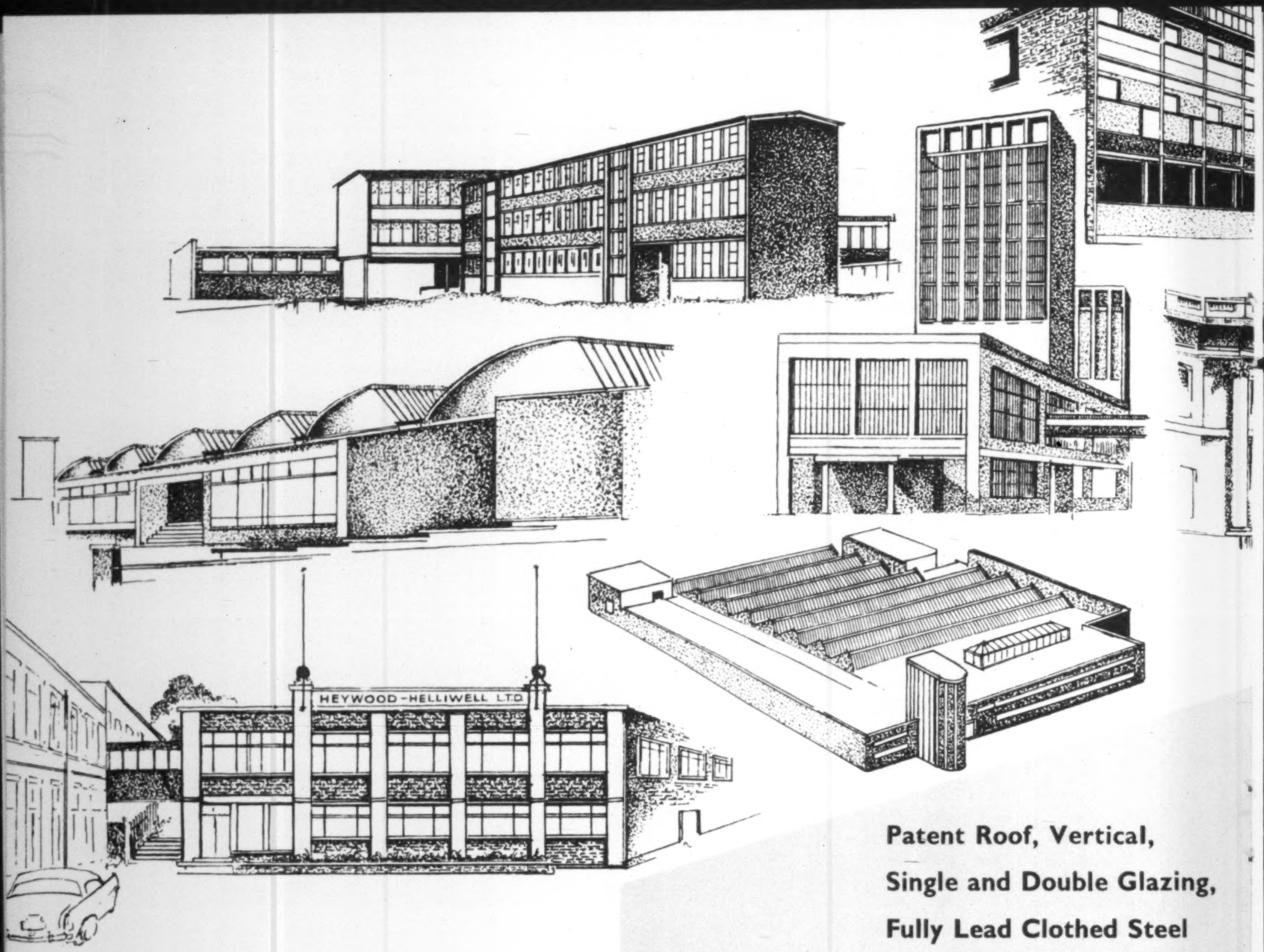

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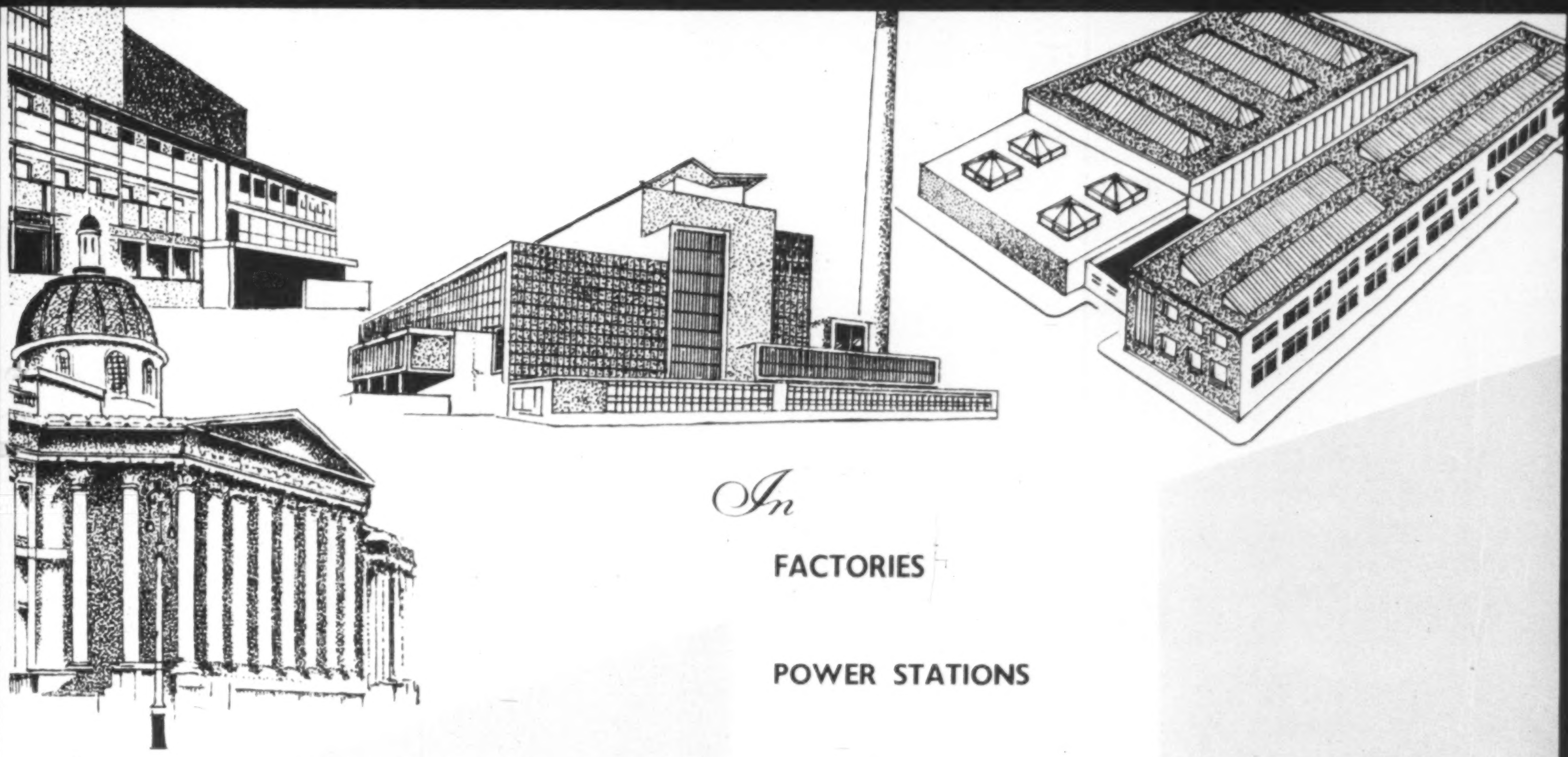

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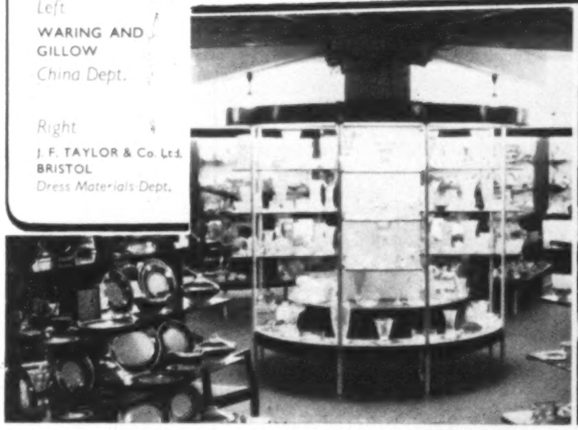

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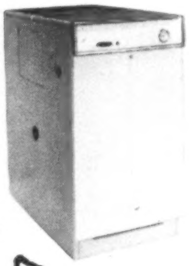

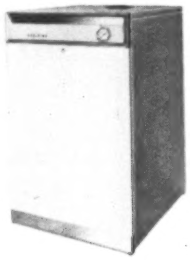

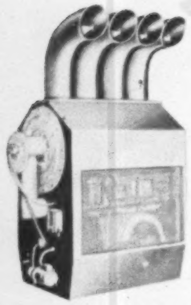

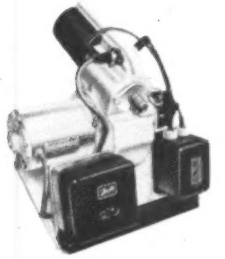

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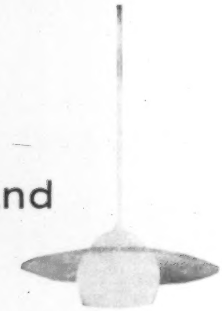

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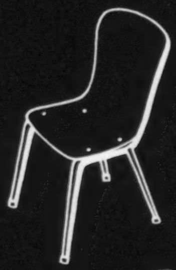

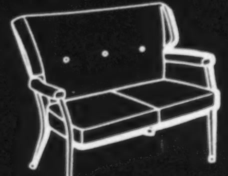

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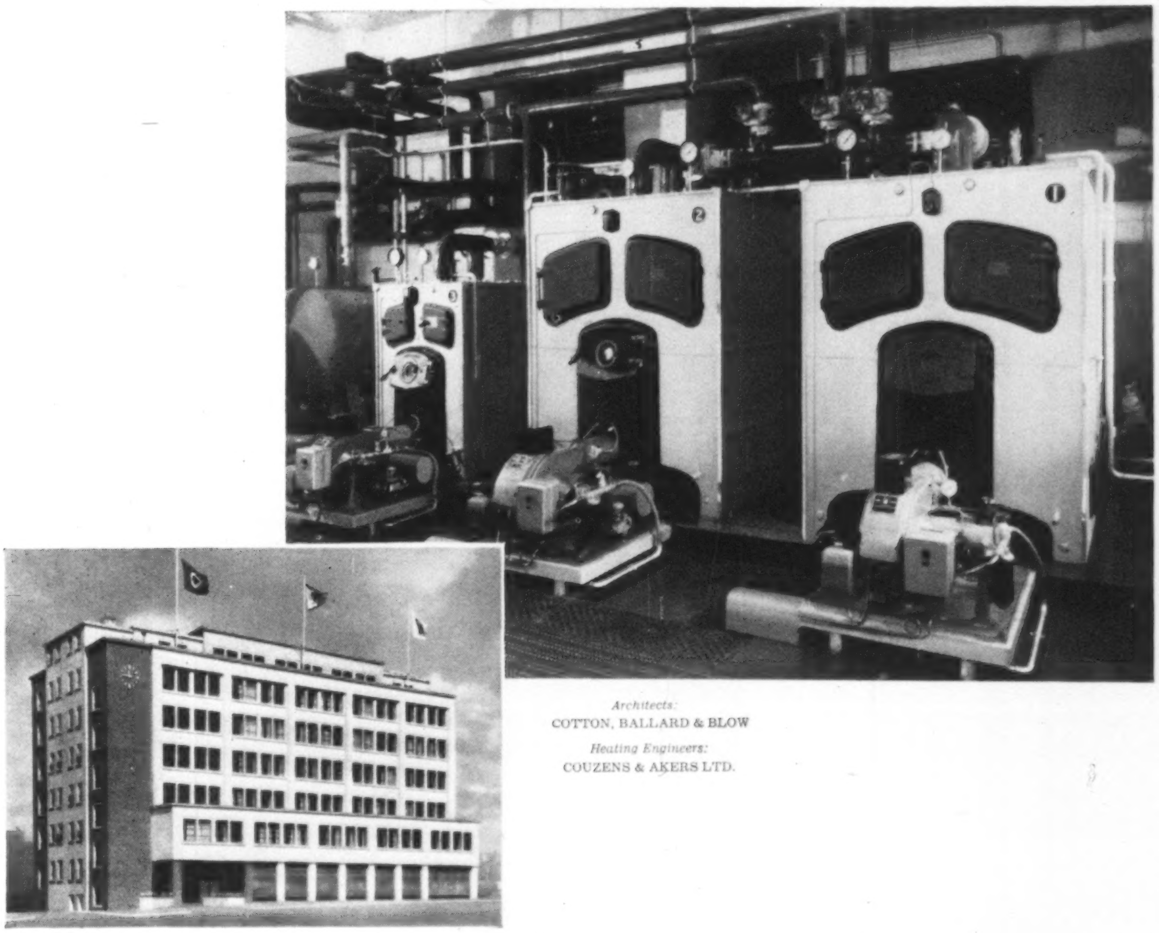

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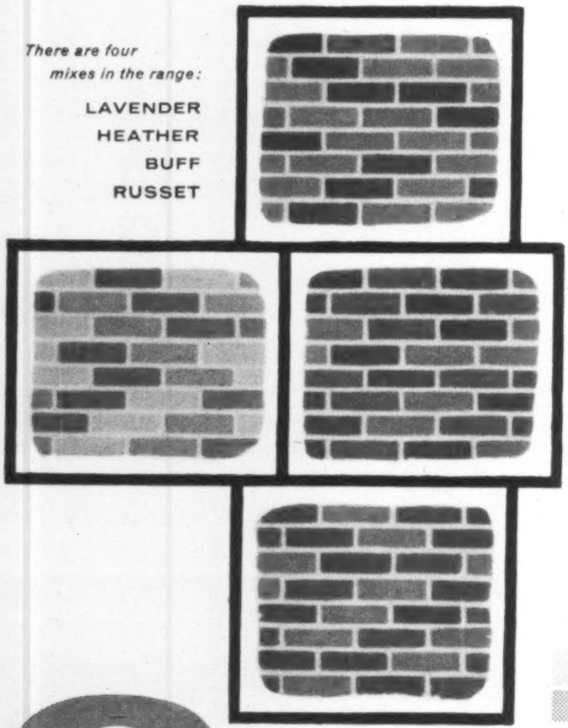

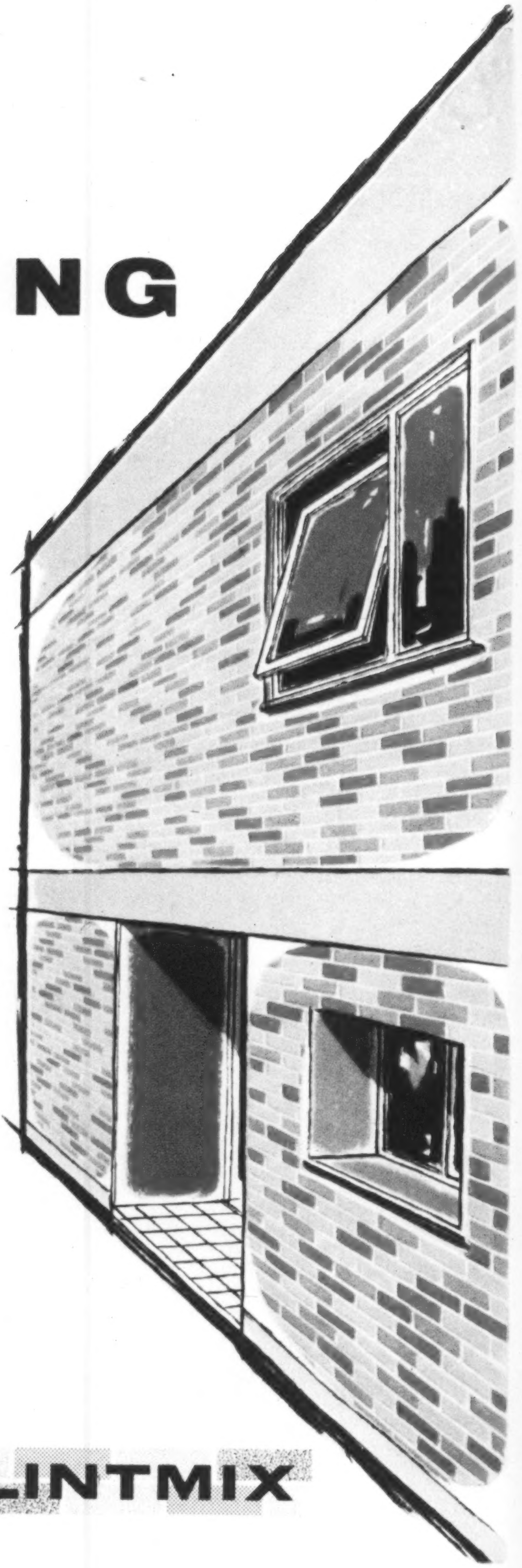

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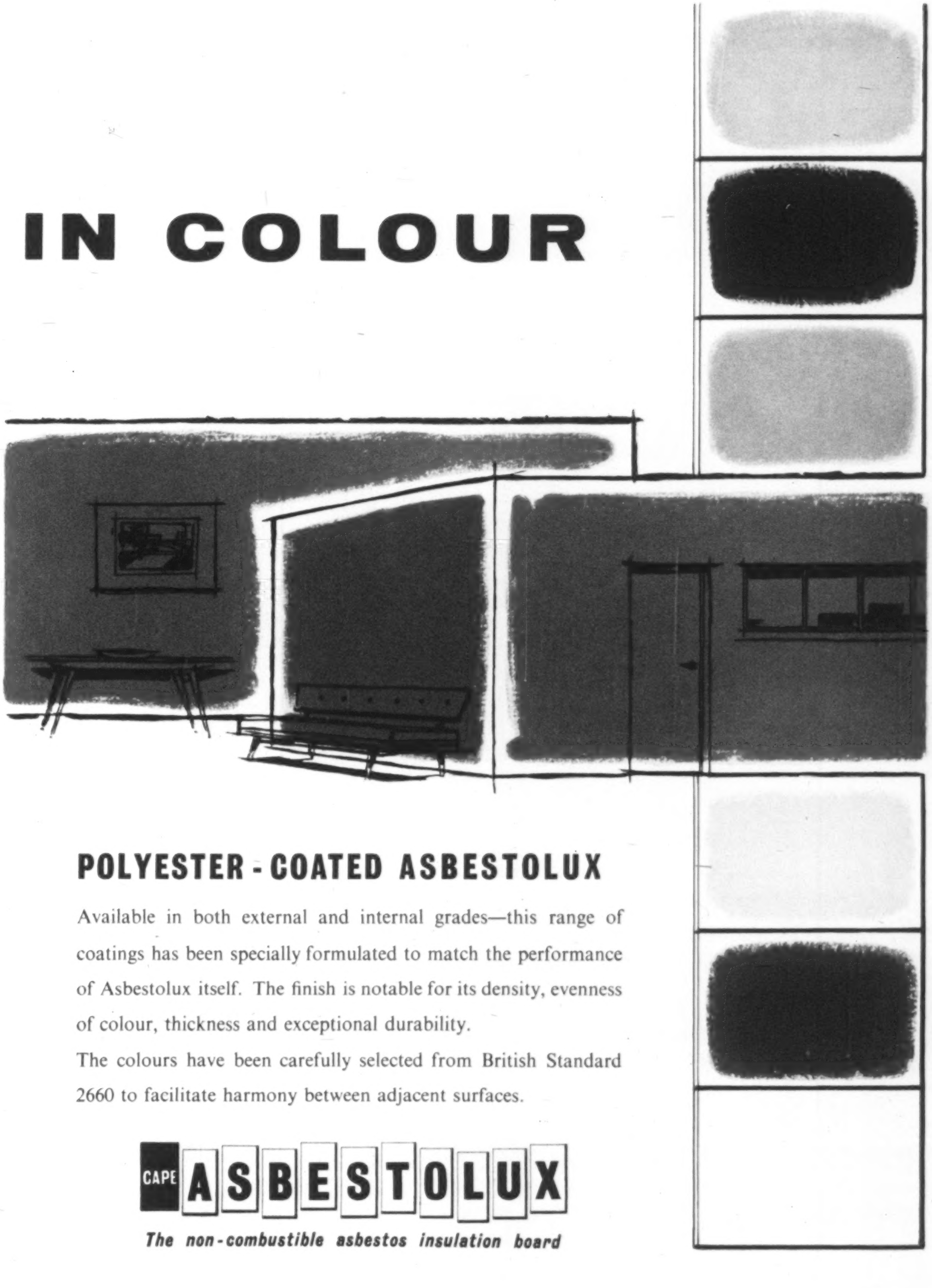

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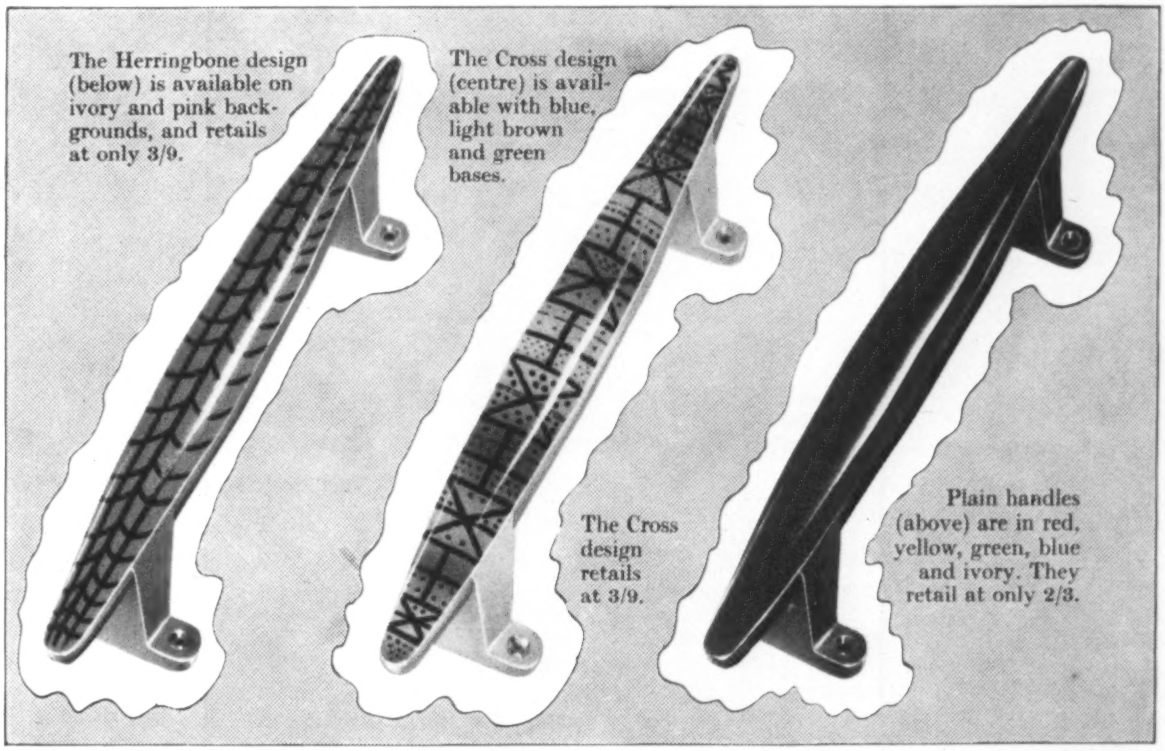

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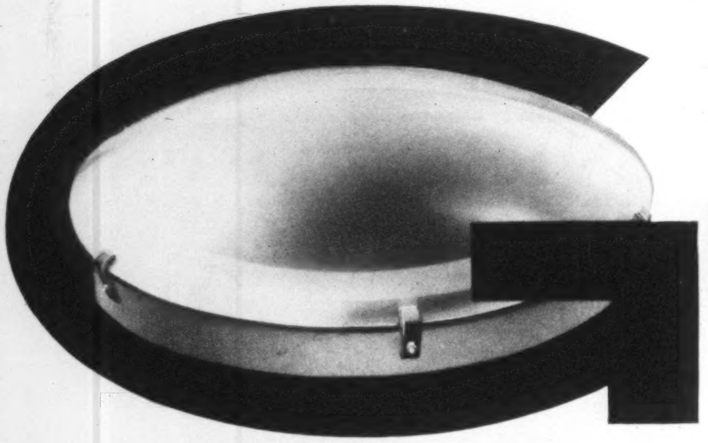

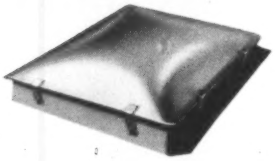

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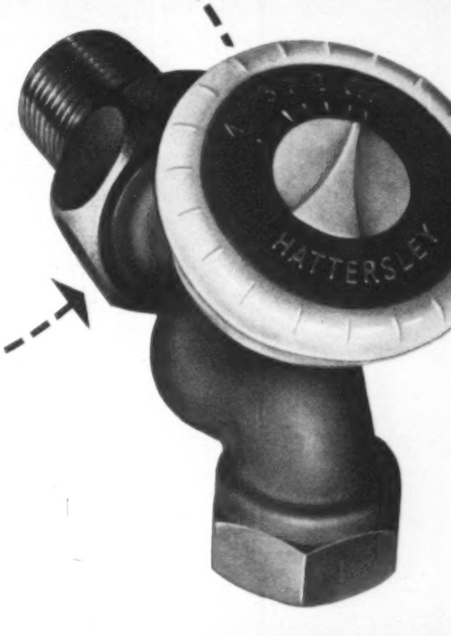

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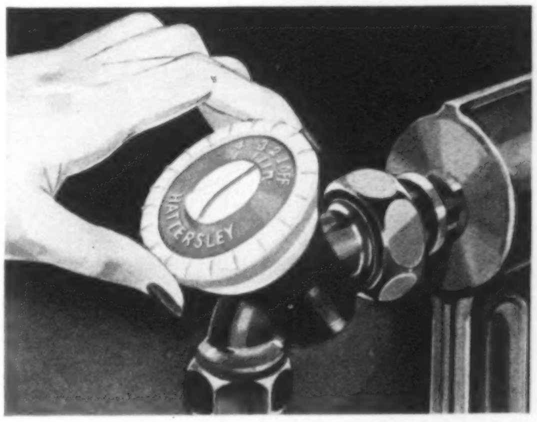

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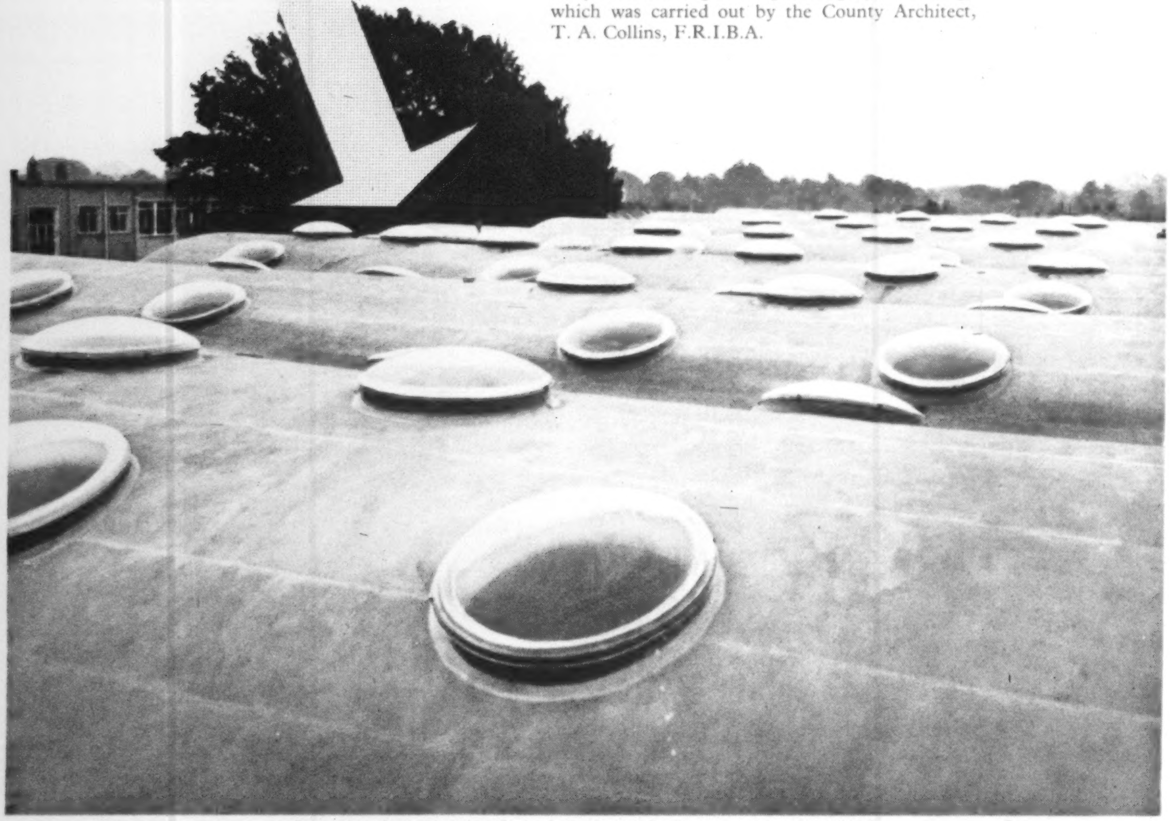

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The release of hardwoods for building purposes has resulted in the use of these materials for the cladding of buildings, pillars, and other features. The very real problems of the protection of hardwood immediately arise.

The purpose of varnishing such woods can be summarised as —

(1) To prevent deterioration due to weathering,
(2) To preserve wood in its natural colour and beauty,
(3) To render wood washable, thus enabling removal of dirt and grime.

Experience has shown that certain varnish systems perform exceptionally well on hardwoods. It is necessary to use a varnish primer for wood, before applying varnish protective coats. An adequate varnish film thickness should be applied. Wood should be smooth, and grain should be filled in order to ensure a smooth continuous film.

Most pleasing effects can be obtained on interior woods, finish varying from Dead Matt, to Eggshell and Gloss. For exterior exposure only Gloss Varnishes are recommended.

Examples of Hardwood Varnish Finishes will be sent on application to —

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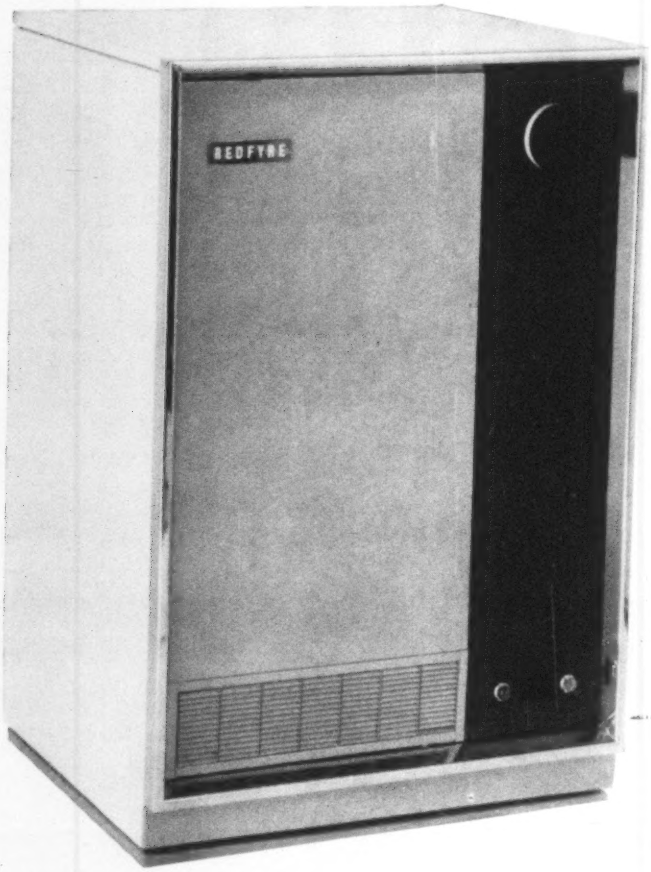

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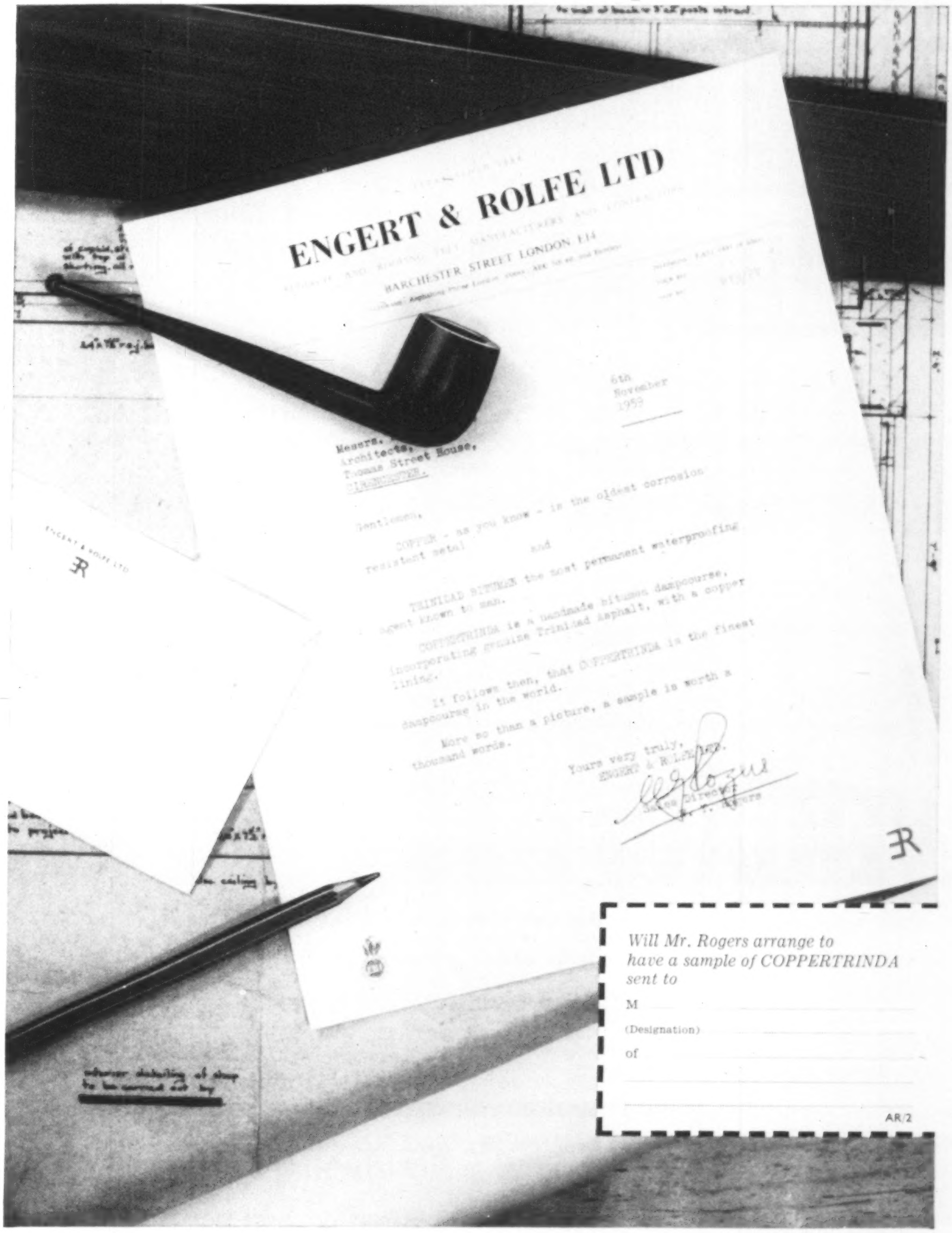

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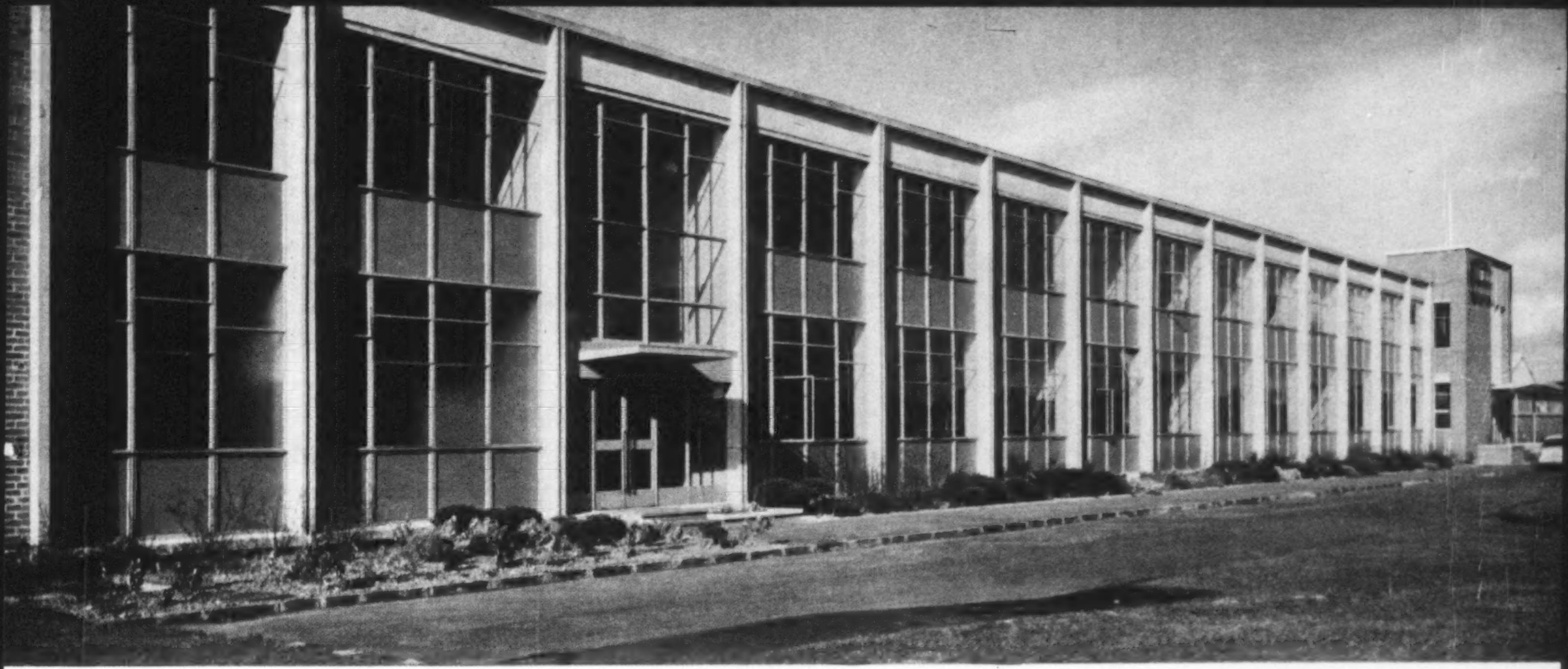

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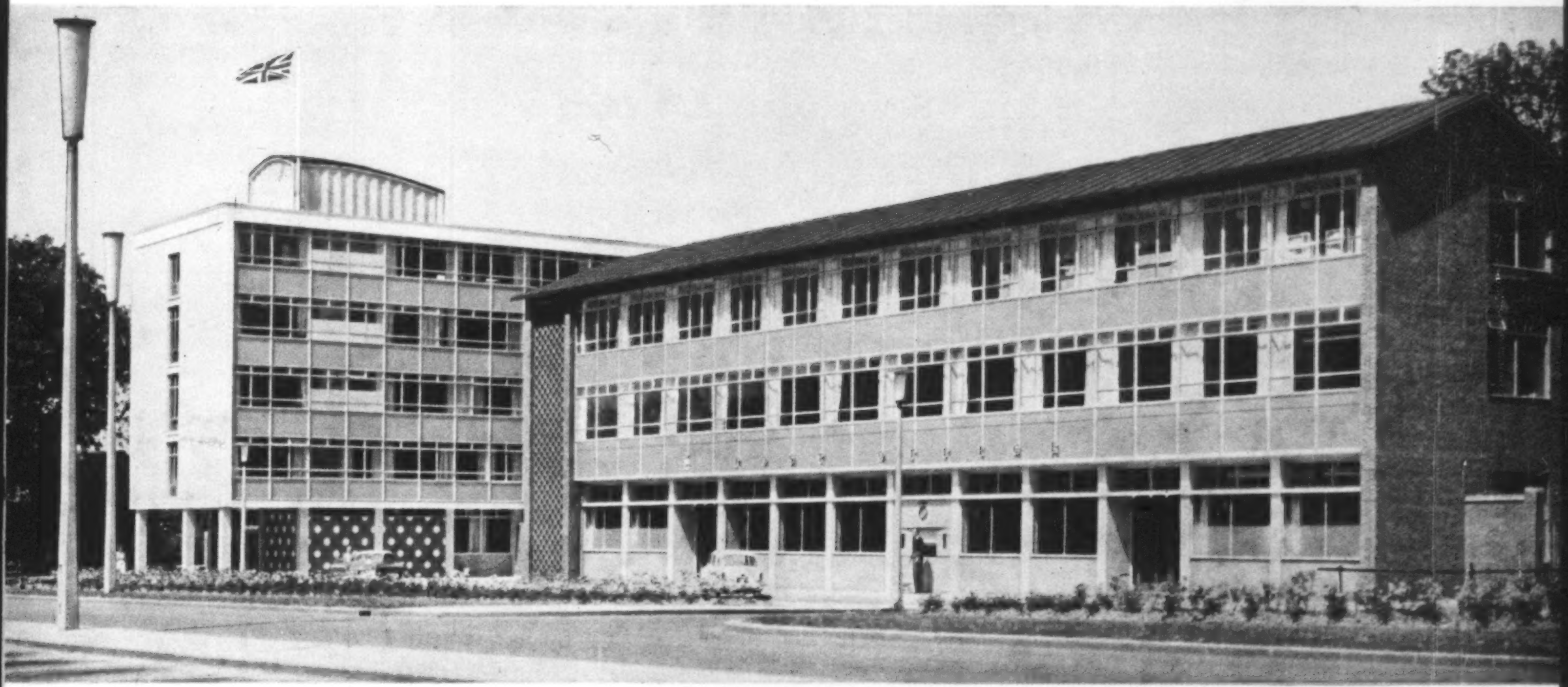
▲ *Turquoise "Muroglass" spandrel cladding for Sunbeam Electric, Ltd., factory at Nerston, East Kilbride. By courtesy of Scottish Industrial Estates, Ltd., proprietors of the building. Architects: Wylie, Shanks & Underwood, Glasgow.*

▼ *Daffodil "Muroglass" for spandrels totalling 3,500 sq. ft. approx. at Crown Building and Head Post Office, Crawley New Town. Designed by the Chief Architect's Department of the Ministry of Works.*



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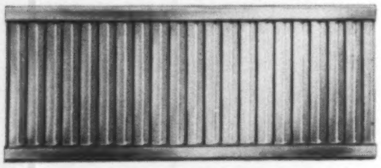

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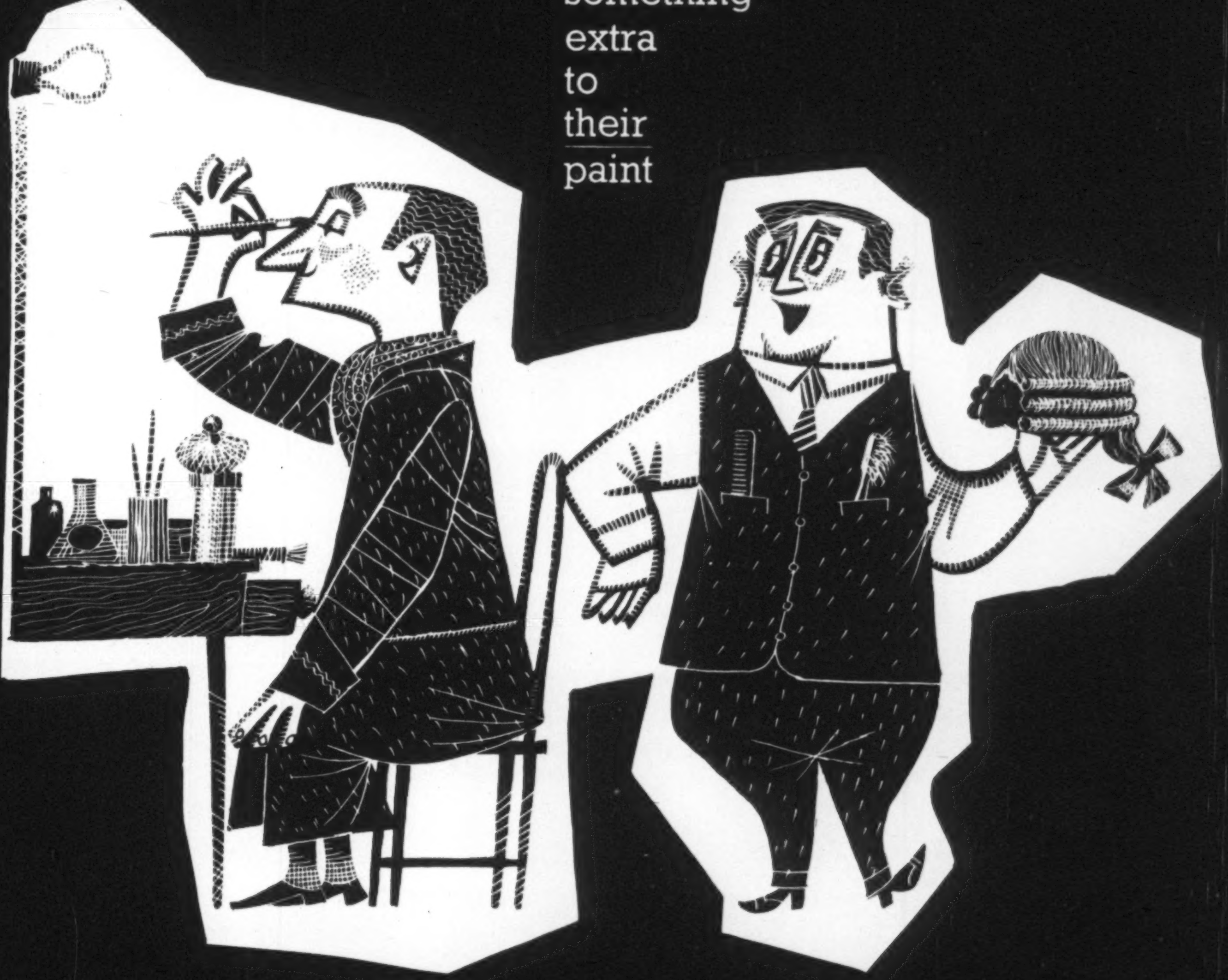

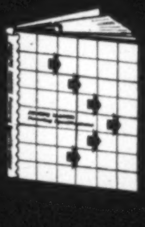

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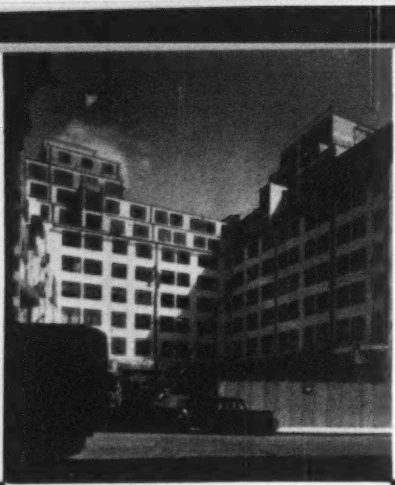

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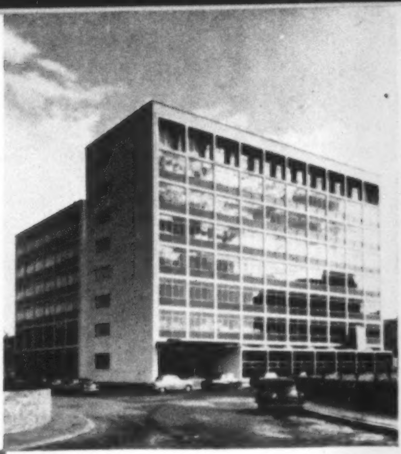

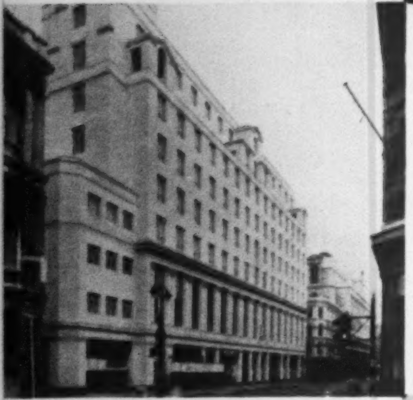

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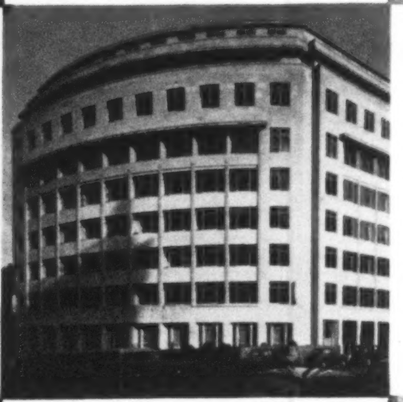

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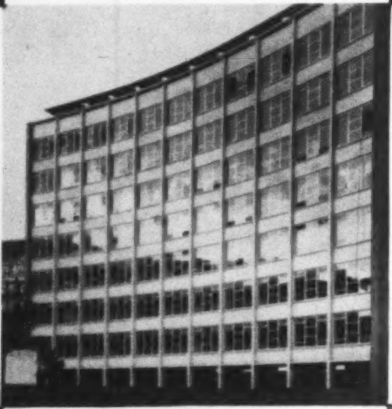

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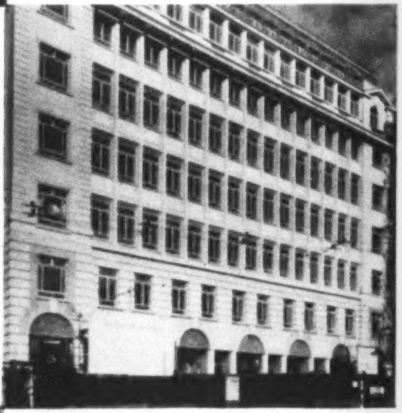

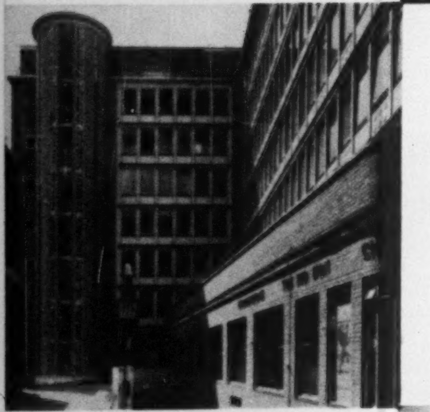

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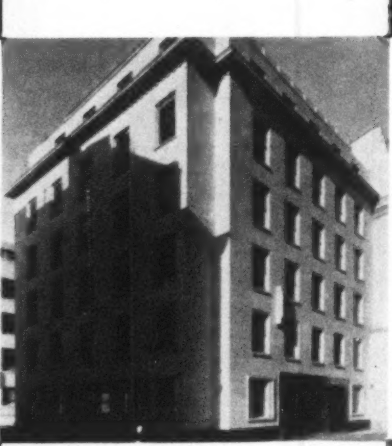

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Architects:
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Architect:
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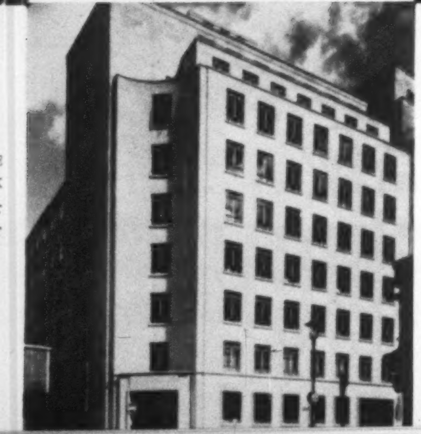

12-20 CAMOMILE STREET
Architects:
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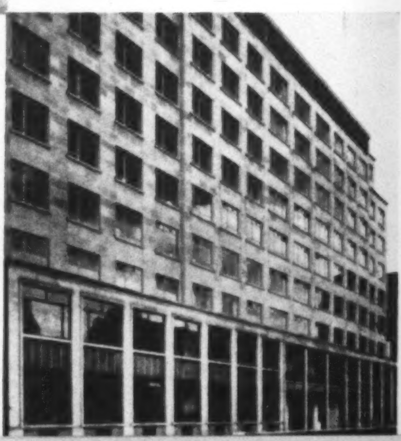

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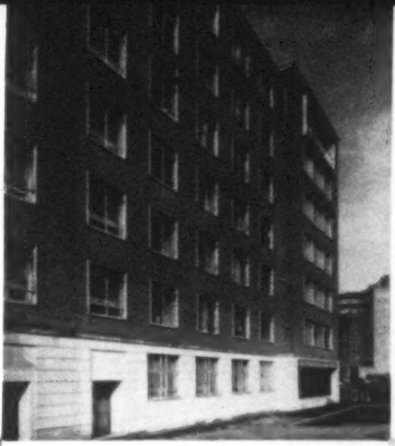

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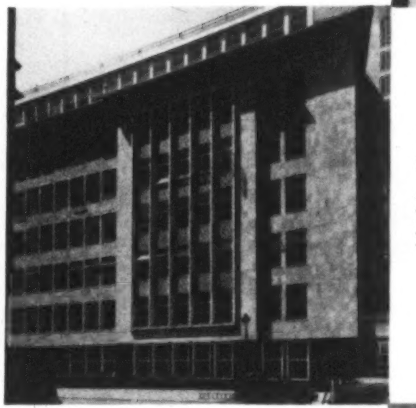

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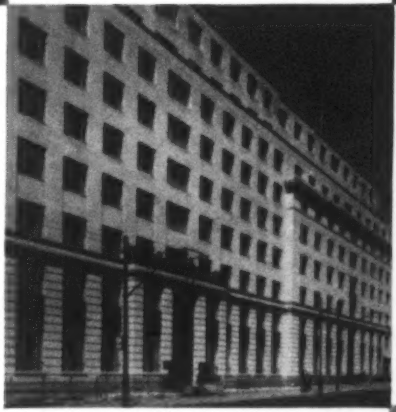

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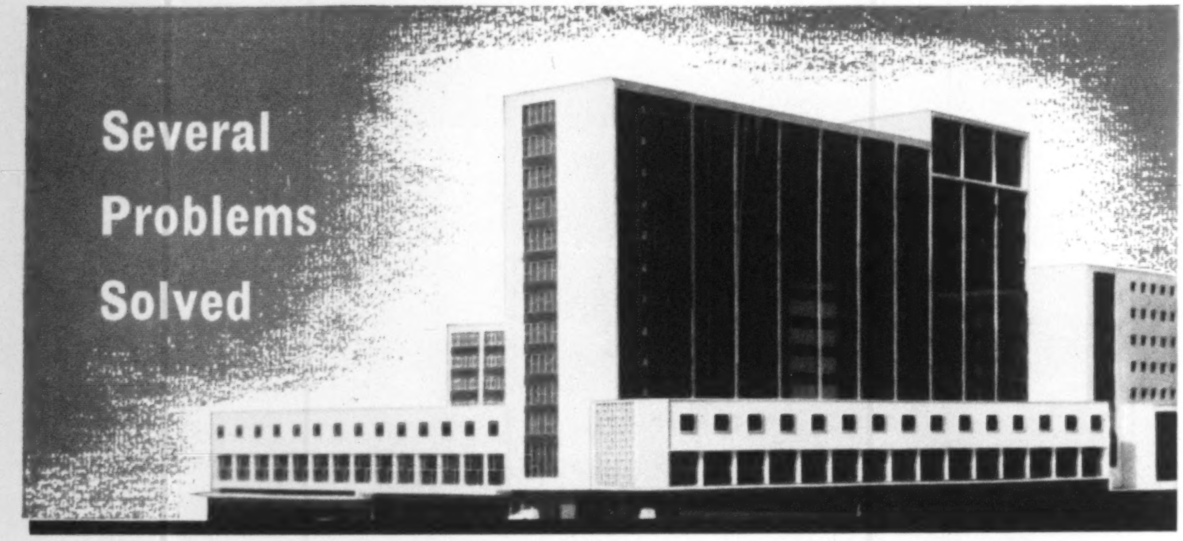

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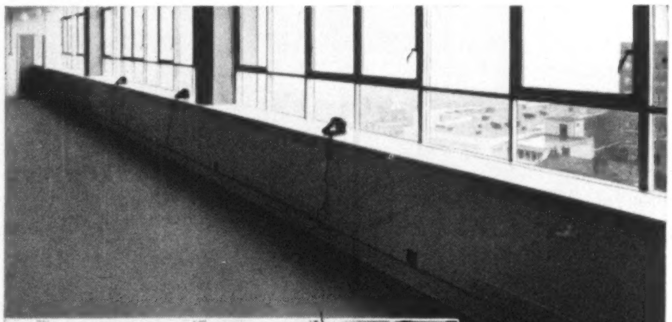

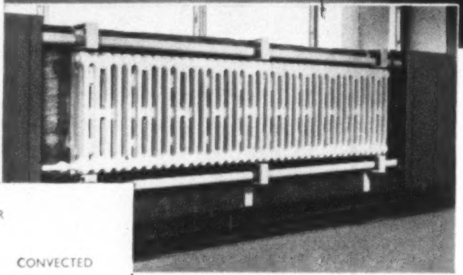

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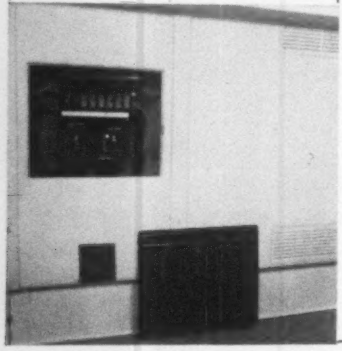

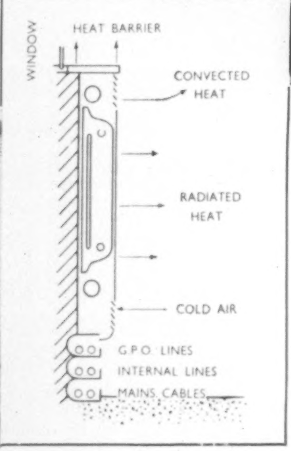

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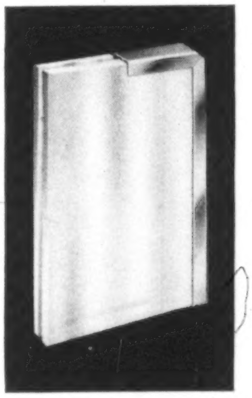

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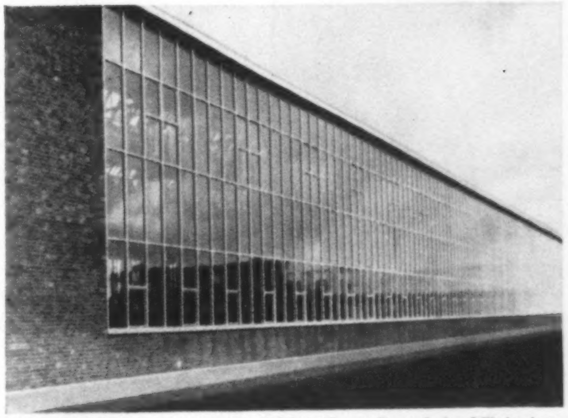

Architect, C. R. Kirby Esq., A.R.I.B.A. Dowty Group Ltd., of Cheltenham.

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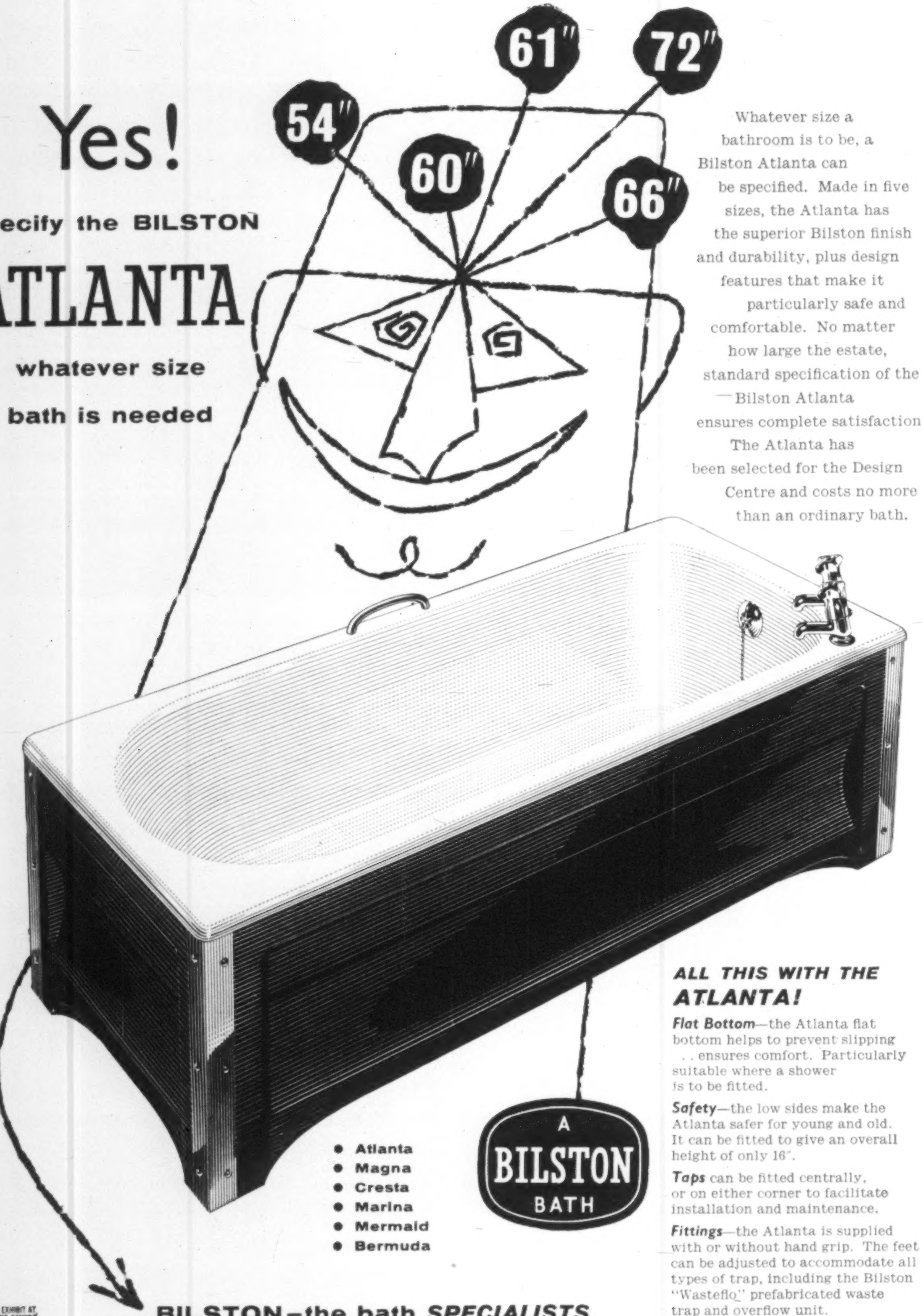

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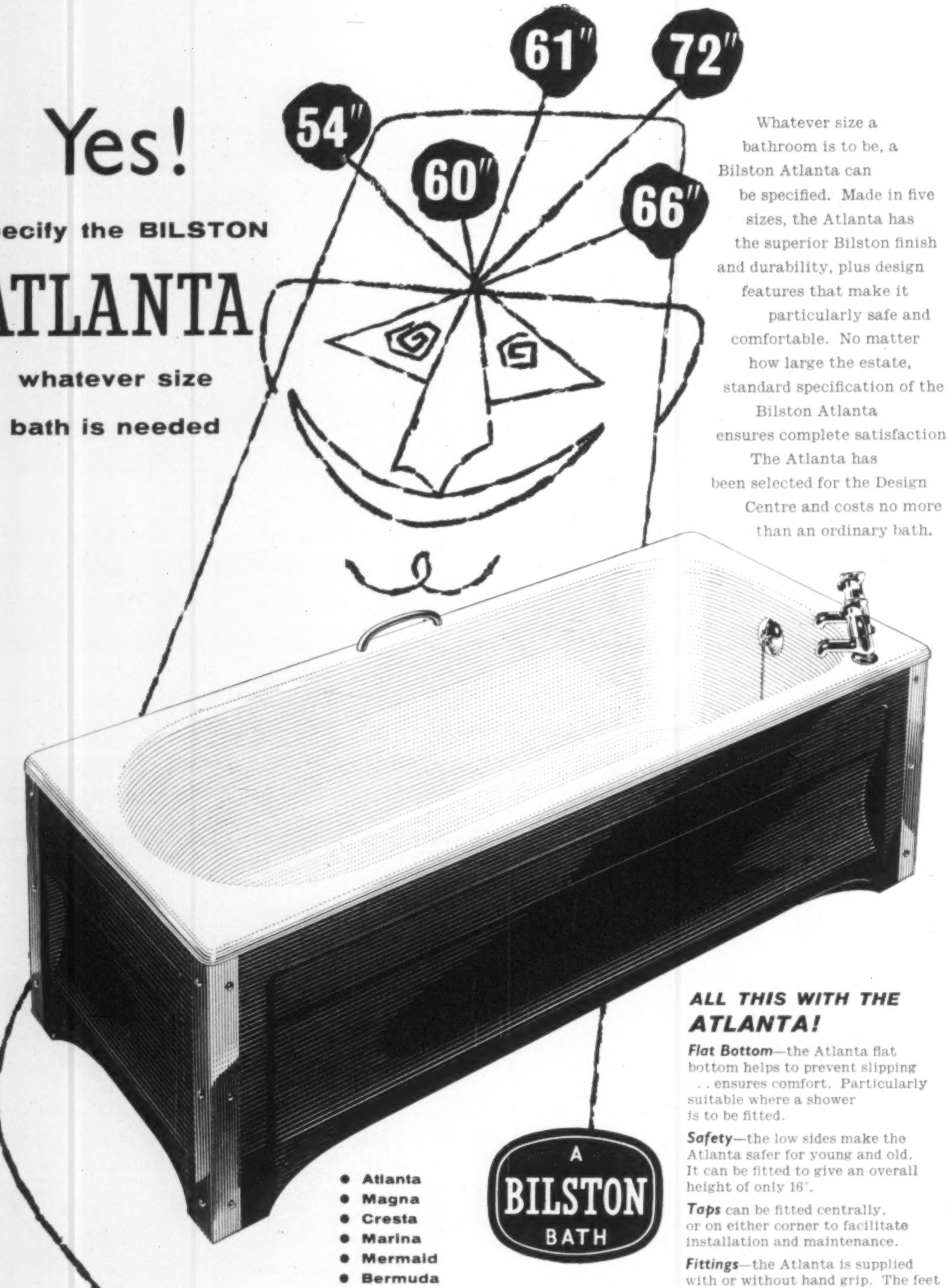

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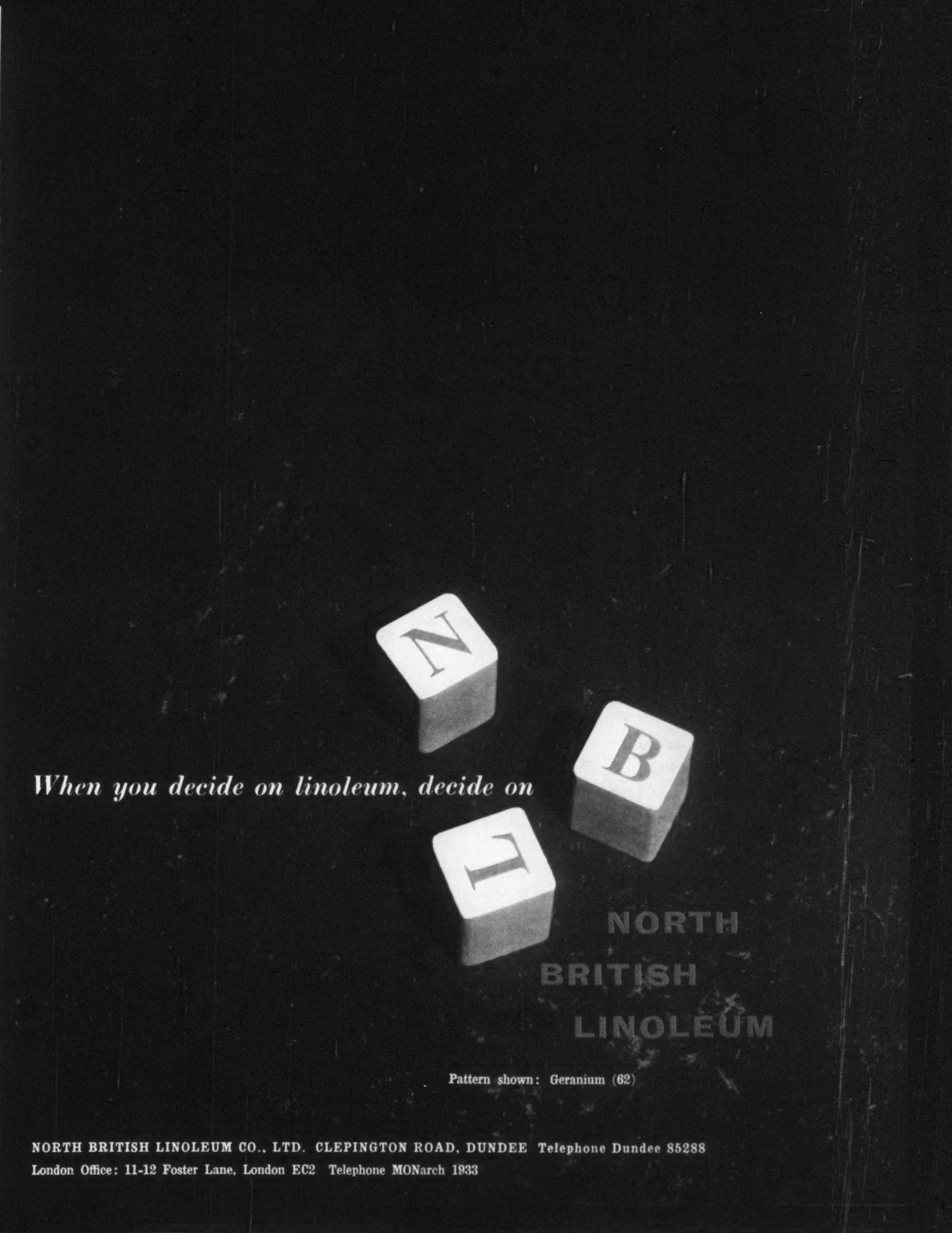
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IS YOUR TIMBER HUNGRY?
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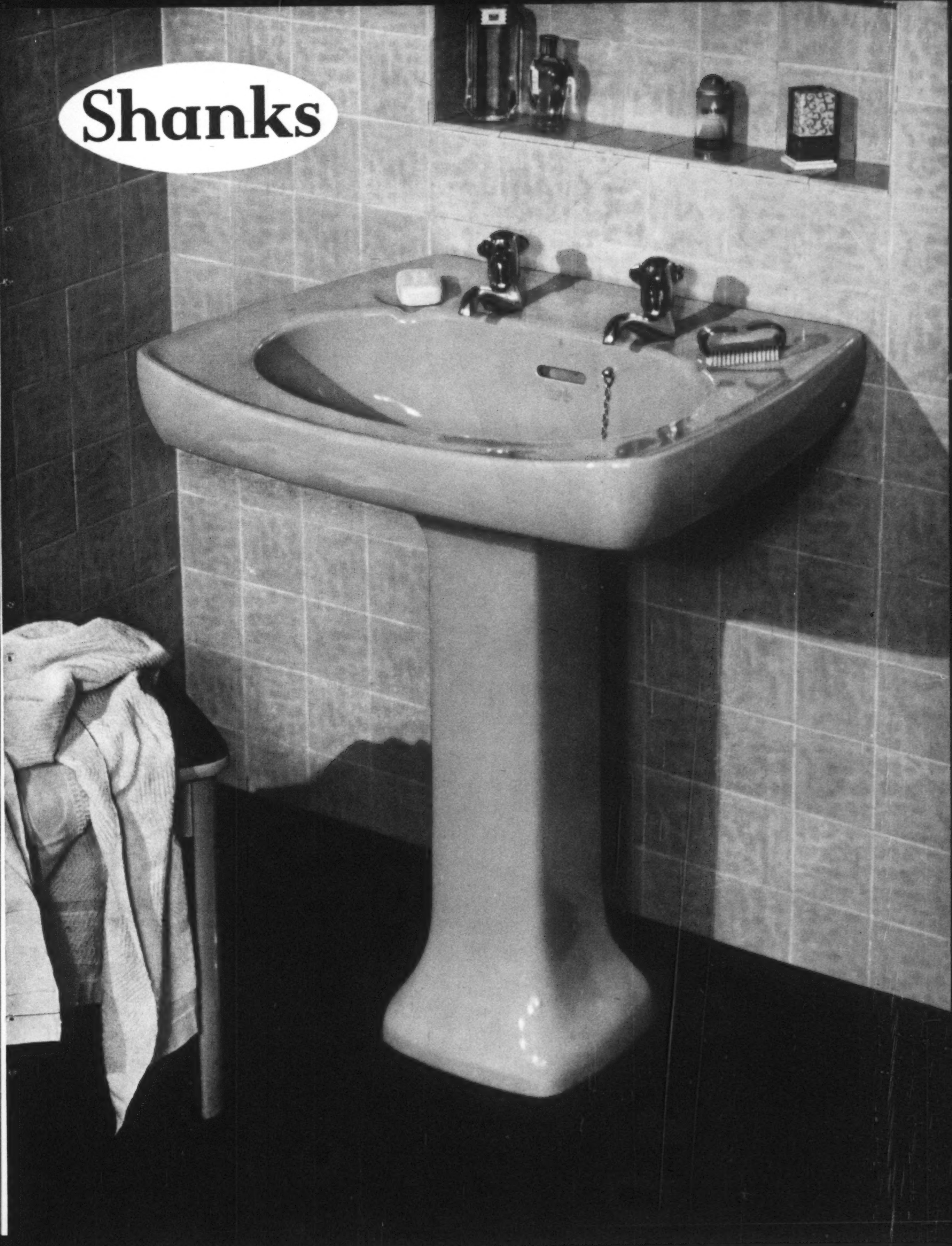
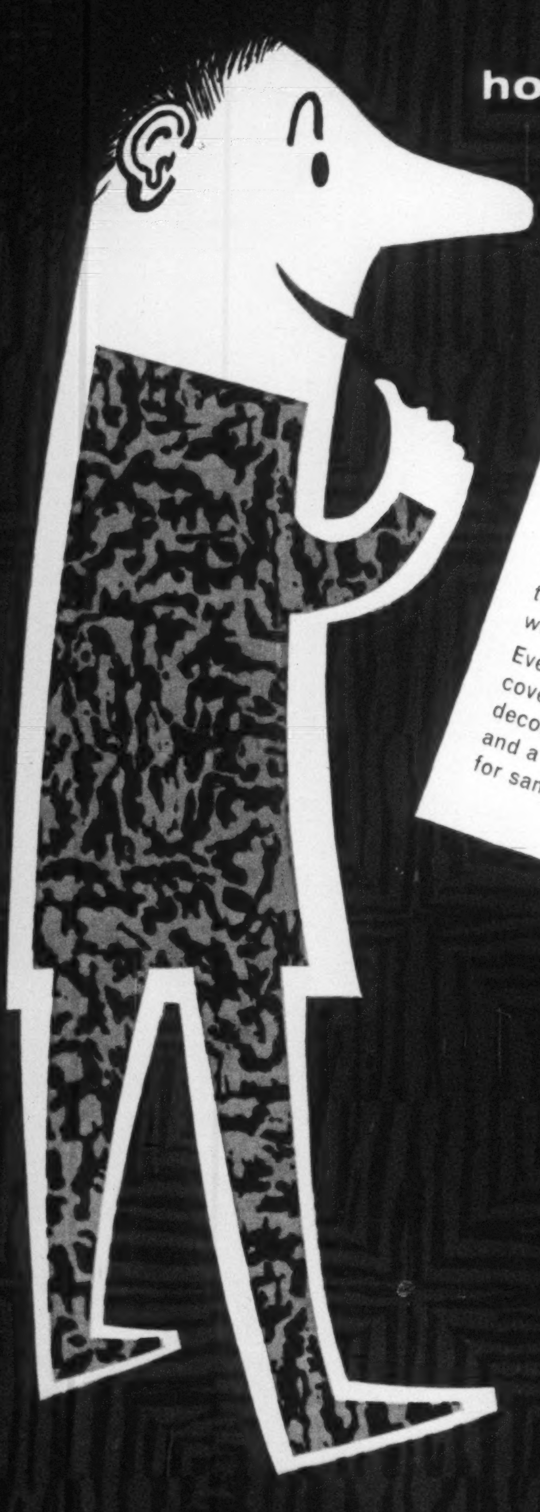

Shanks

how is a design born?



There are no tools or materials for creating a design. You can't make an idea with a machine or turn out original designs on a production line. The only basics are a man's imagination, experience—and a certain indefinable something. And of course good designs are very hard to come by.

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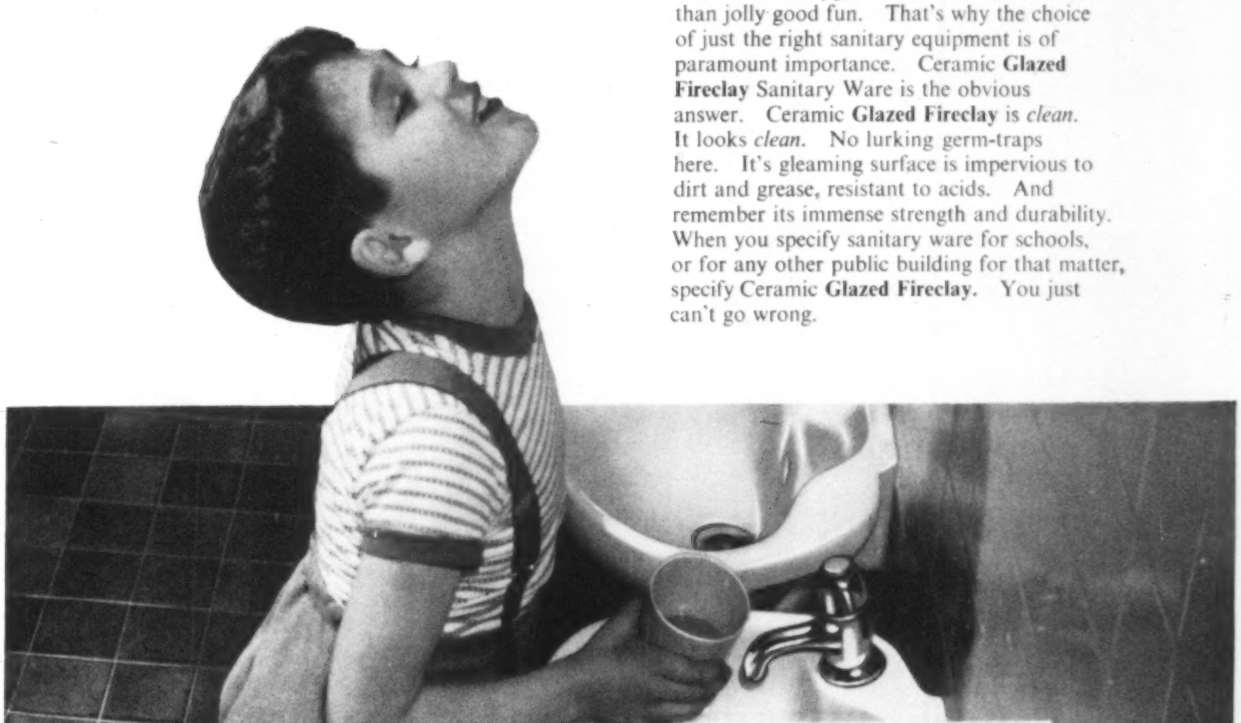

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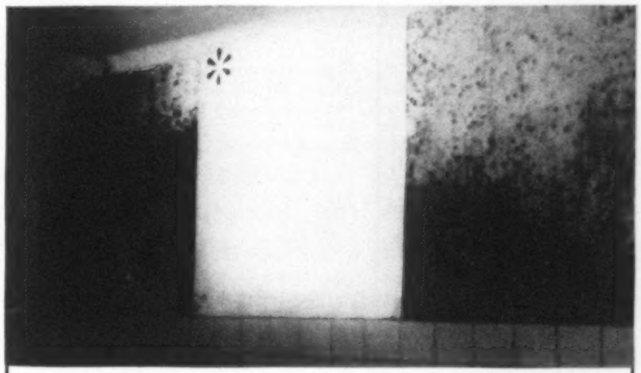

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Messieurs,

We have carried out, in 1958, trials with paints on a wall panel in one of our rooms where we manufacture soft pastes. A certain number of products have been applied on adjoining panels on the same day.

I have pleasure in sending you herewith a photograph which was taken approximately 8 months after application of the paints.

The Dentolite which you have sold us is in the centre panel of the photograph. It is evident that this has behaved perfectly in comparison with the two competitive products on its left and its right, particularly as the little stains that show in the left hand bottom corner are accidental dirt marks.

Allow me to congratulate you on the quality of your product and I remain,

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A Technical Advisory Panel is at your service and Scientific Literature and Samples are available on request.

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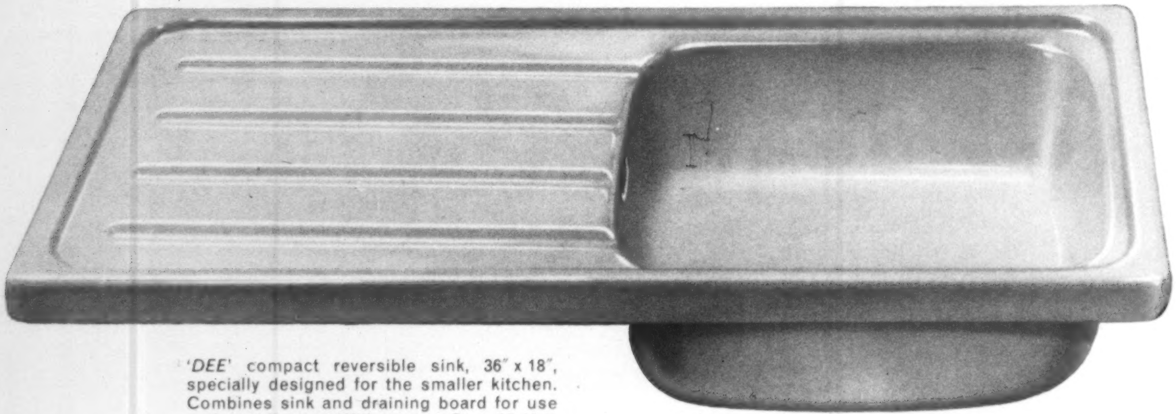


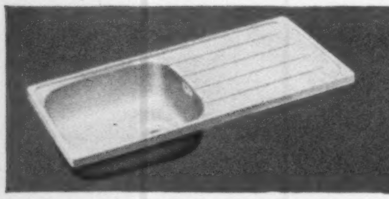
'*DEE*' compact reversible sink, 36" x 18", specially designed for the smaller kitchen. Combines sink and draining board for use under wall taps. Without overflow £5.10.9. With overflow £6.0.9. (Retail prices).

Made from top-grade British Standard steel which "takes" a superior quality enamel—acid and alkali resistant—hard to stain and easy to clean.

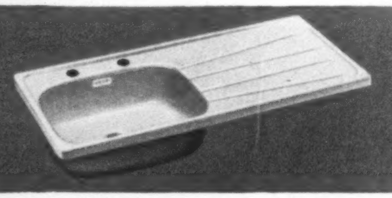
This gleaming hygienic finish is now available, throughout the range, in a choice of four colours—white, cream, pale green and pale blue.

Curran sinks are designed to give maximum bowl capacity within the minimum space, with correctly sloped draining board combined.

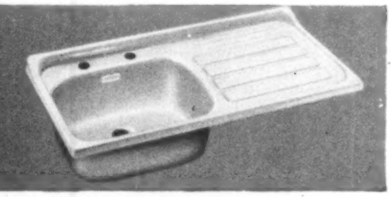
They fit ideally into most kitchen layouts and are easy to install. Every model is supplied with left- or right-hand bowl, with or without overflow fittings.



'*EXE*' standard length reversible, large bowl, for wall taps; 42" x 18". Without overflow £5.16.0. With overflow £6.6.0. (Retail prices).



'*WYE*' left- or right-hand bowl, with back shelf, for pillar taps; 42" x 18". Without overflow £6.3.6. With overflow £6.13.6. (Retail prices).



'*FORTH*' Full size model, left- or right-hand bowl, with splash back, for pillar taps; 42" x 21". Without overflow £7.2.6. With overflow £7.15.0. (Retail prices).

Curran 'know-how' with steel and enamel means sturdy quality, clean design and fine finish *at economy prices.* Write us for illustrated folder detailing the full range; also for details of Curran vitreous enamelled pressed steel BATHS.

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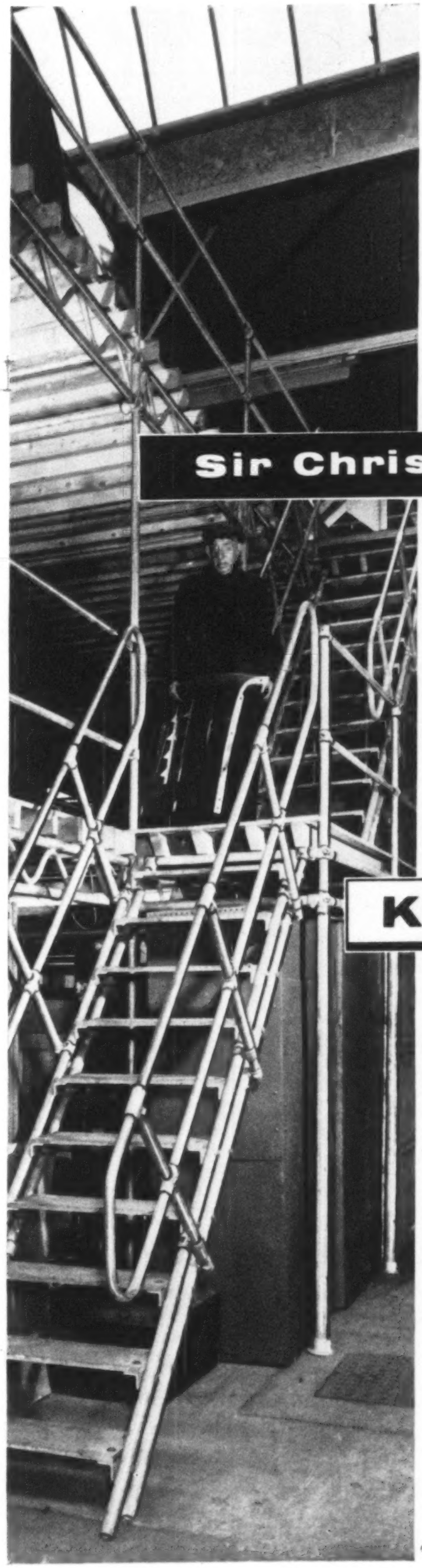

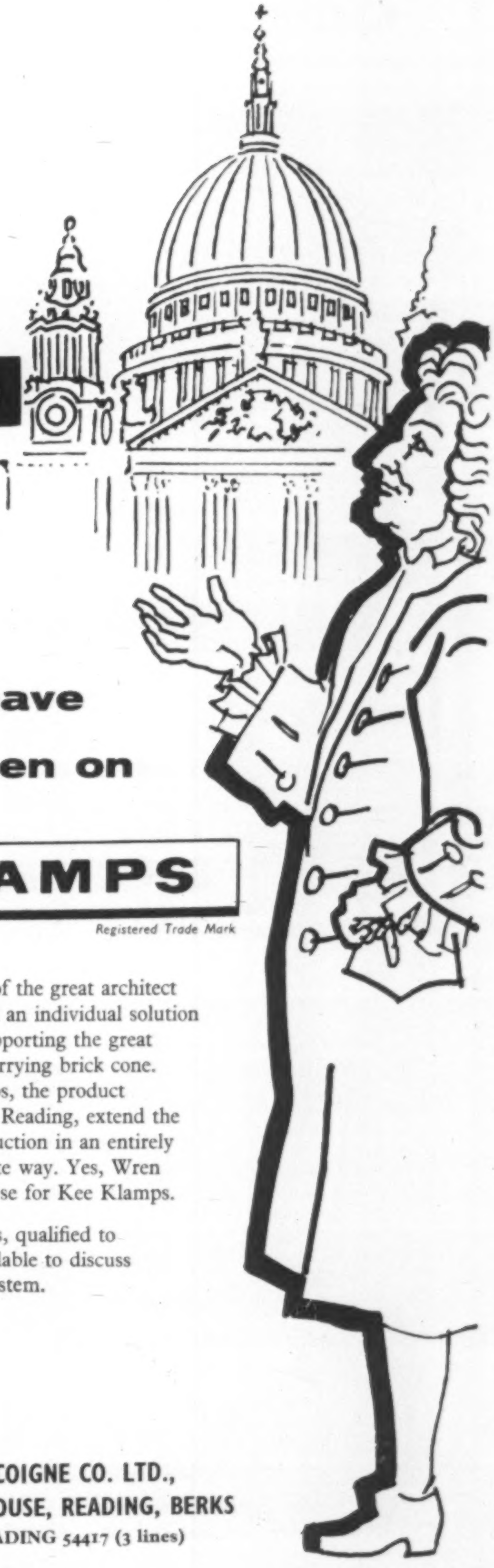

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Curran SEAPORCLAD INFILL PANEL TYPE 7 AND 5

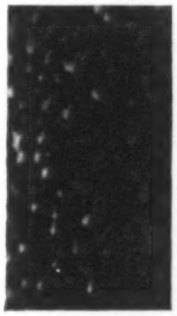
Seaporclad vitreous enamelled steel* Infill Panel Type No 7 which has been used to clad the new Cyntwell School, Cardiff is one of a wide range of infill and facing panels manufactured by Edward Curran Engineering Ltd. These panels provide permanent colour and excellent insulation. They are light and versatile in use and quickly assembled. The smooth vitreous enamelled surfaces are washed by every rainfall and require the minimum maintenance. Panels are available up to 8′ 0″ × 4′ 0″. Recommended maximum size is 6′ 0″ × 4′ 0″. Seaporclad panels comply with the standards and specifications laid down by the Vitreous Enamel Development Council. Full technical information is available from the sole manufacturers in the British Isles: Edward Curran Engineering Ltd., Architectural Division, Cardiff. Telephone: Cardiff 33644.

** Curran vitreous enamel is a true glass surface fired at 860°C on steel; it is permanent, will not fade and is highly resistant to chemical attack.*

Seaporclad Infill Panels are also being manufactured and used in Australia, Austria, Belgium, Brazil, Canada, Chile, Denmark, France, Germany, Holland, Italy, Japan, Luxembourg, New Zealand, Norway, South Africa, Spain, Sweden, Switzerland, Turkey, United States of America.

Colour: almost all colours of the British Standard 101 Range.

Finish: available in full gloss, matt and semi-matt.



Texture: supplied stippled, marbled, etc.

THE NEW CYNTWELL SCHOOL, CARDIFF

All panels used are Curran Seaporclad Type 7, finished in full gloss. Total surface area: 1228.43 sq. ft.

Architects: City Architects Department, Cardiff
Contractors: John Laing & Sons Ltd.
Curtain Walling: John Williams of Cardiff Ltd.

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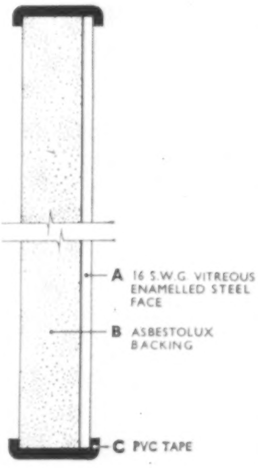
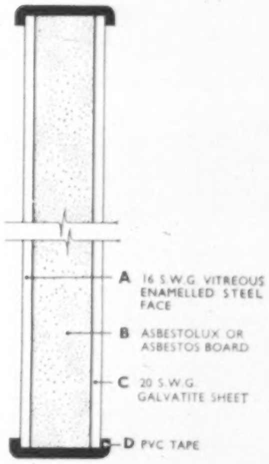




A 16 S.W.G. VITREOUS ENAMELLED STEEL FACE
B ASBESTOLUX OR ASBESTOS BOARD
C 20 S.W.G. GALVATITE SHEET
D PVC TAPE

TYPE 7

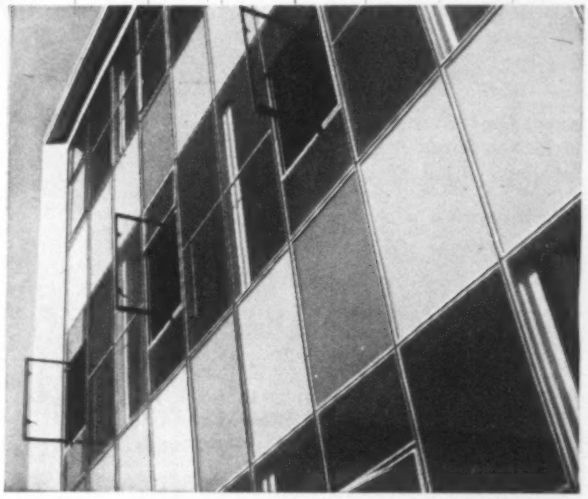
The face is a flat vitreous enamelled 16-gauge steel sheet, bonded with neoprene adhesive to an Asbestolux or asbestos board, ⅜″, ½″ or ¾″ thick. Panel edges are sealed all round with PVC tape.

'U' Value	Weight per sq. ft.	Panel Thickness	Core Thickness
.619	3 lb. 11¾ oz.	7/16″	⅜″
.503	4 lb. 1 oz.	9/16″	½″
.422	4 lb. 11½ oz.	13/16″	¾″

TYPE 5

is exactly the same as Type 7, except that the Asbestolux is backed up with a 20-gauge electro-galvanized steel sheet.

'U' value	Weight per sq. ft.	Panel Thickness	Core Thickness
.550	5 lb. 9 oz.	½″	⅜″
.500	6 lb. 0 oz.	⅝″	½″
.422	6 lb. 14 oz.	⅞″	¾″



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Architects: F. Boreham, Son & Wallace

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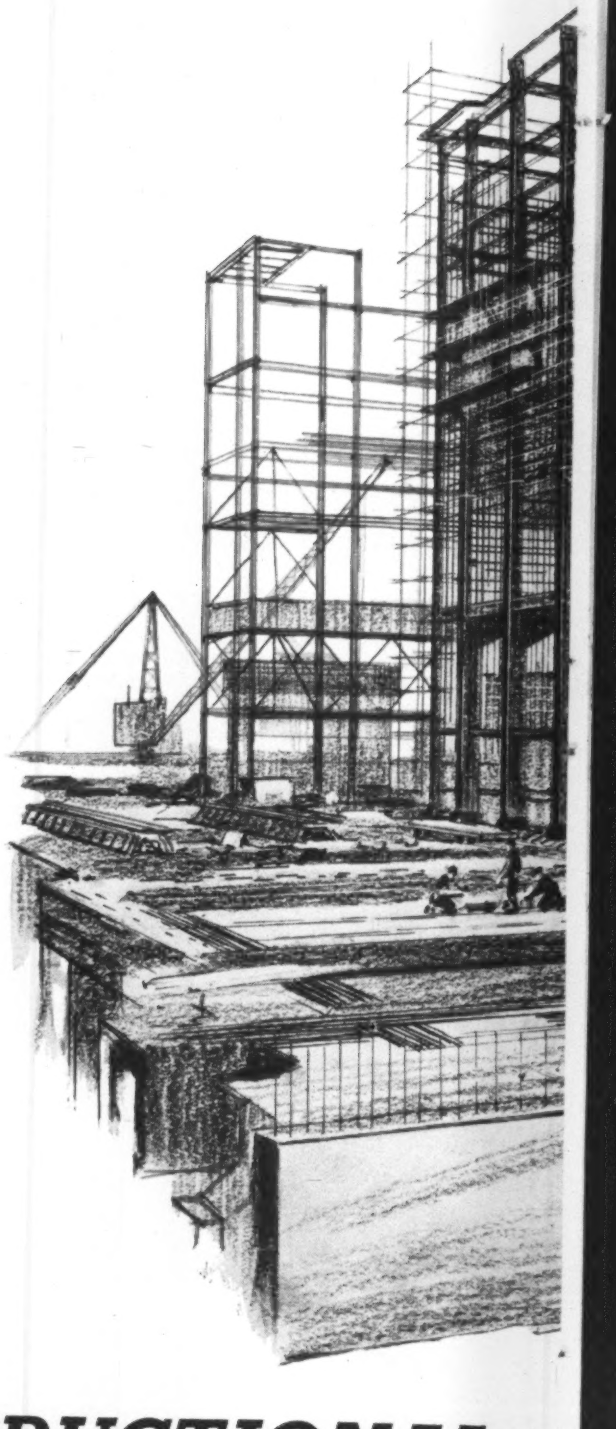

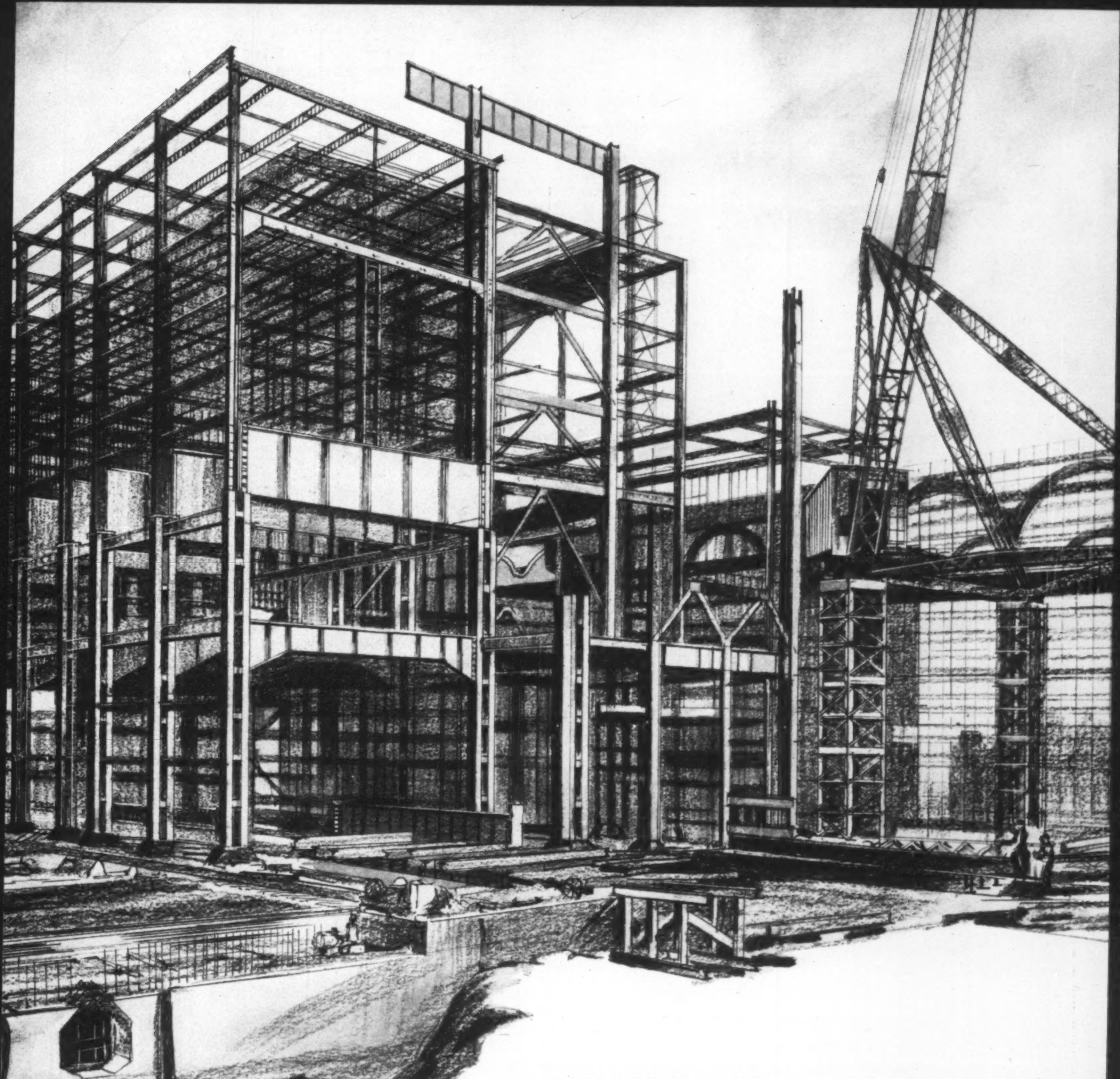

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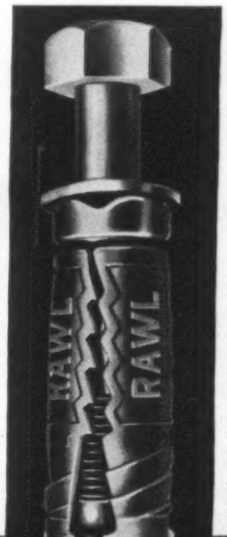

The Hospital Escolar in Lisbon. Rawlplug Fixing Devices were used extensively in this building to fix electrical equipment, metal window blinds and many other fixtures. Rawlplug Fixing Devices ensure complete safety in fixing Lighting, Heating, Ventilating, Sanitary and other fittings, and are suitable for every material from sheet metal and plastic partitions to fixings in concrete ceilings.

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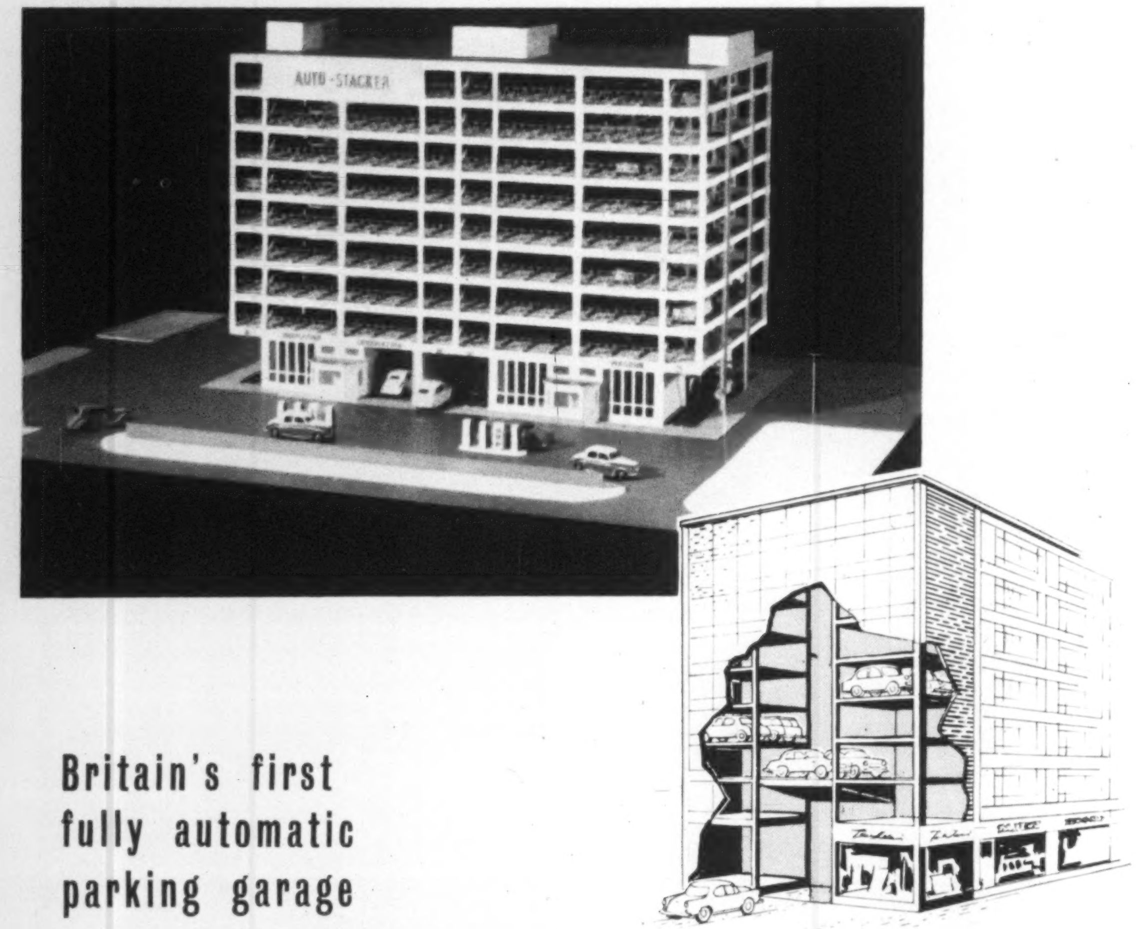

Britain's first fully automatic parking garage

Cut-away section shows 8-floor Stacker attached to a six-storey building, with room for double parking on each side of the hoist. Cars are turned through 90° at ground level by a turntable on the hoist.

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We will welcome enquiries from any Authority Property Owner, or Garage Operator and our Engineers are available for consultation.

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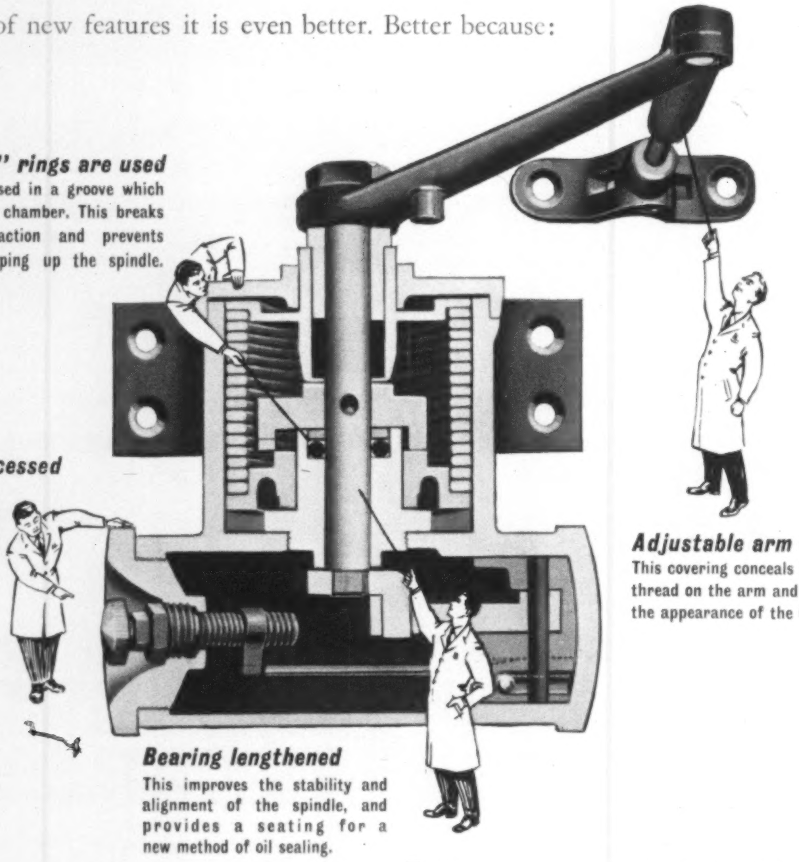

Rubber "O" rings are used
These are housed in a groove which creates an air chamber. This breaks capillary attraction and prevents oil from creeping up the spindle.

Check regulator recessed
This improves the appearance of the Closer, and removes all possibility of damage either before or after it is fitted to the door.

Adjustable arm covered
This covering conceals the screw thread on the arm and improves the appearance of the Closer.

Bearing lengthened
This improves the stability and alignment of the spindle, and provides a seating for a new method of oil sealing.

'BRITON'

DOOR CLOSER

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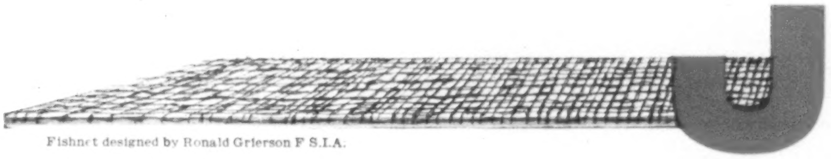

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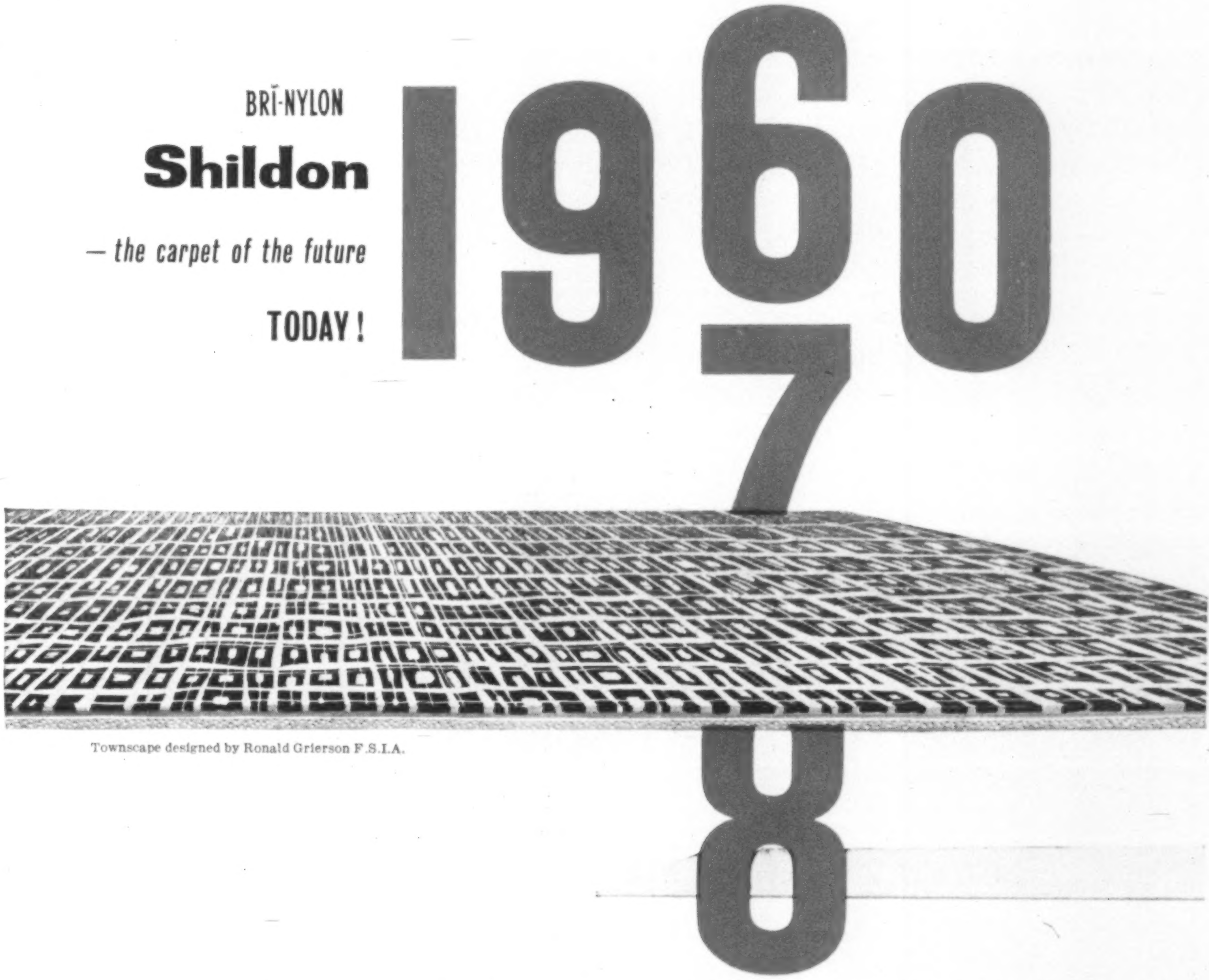

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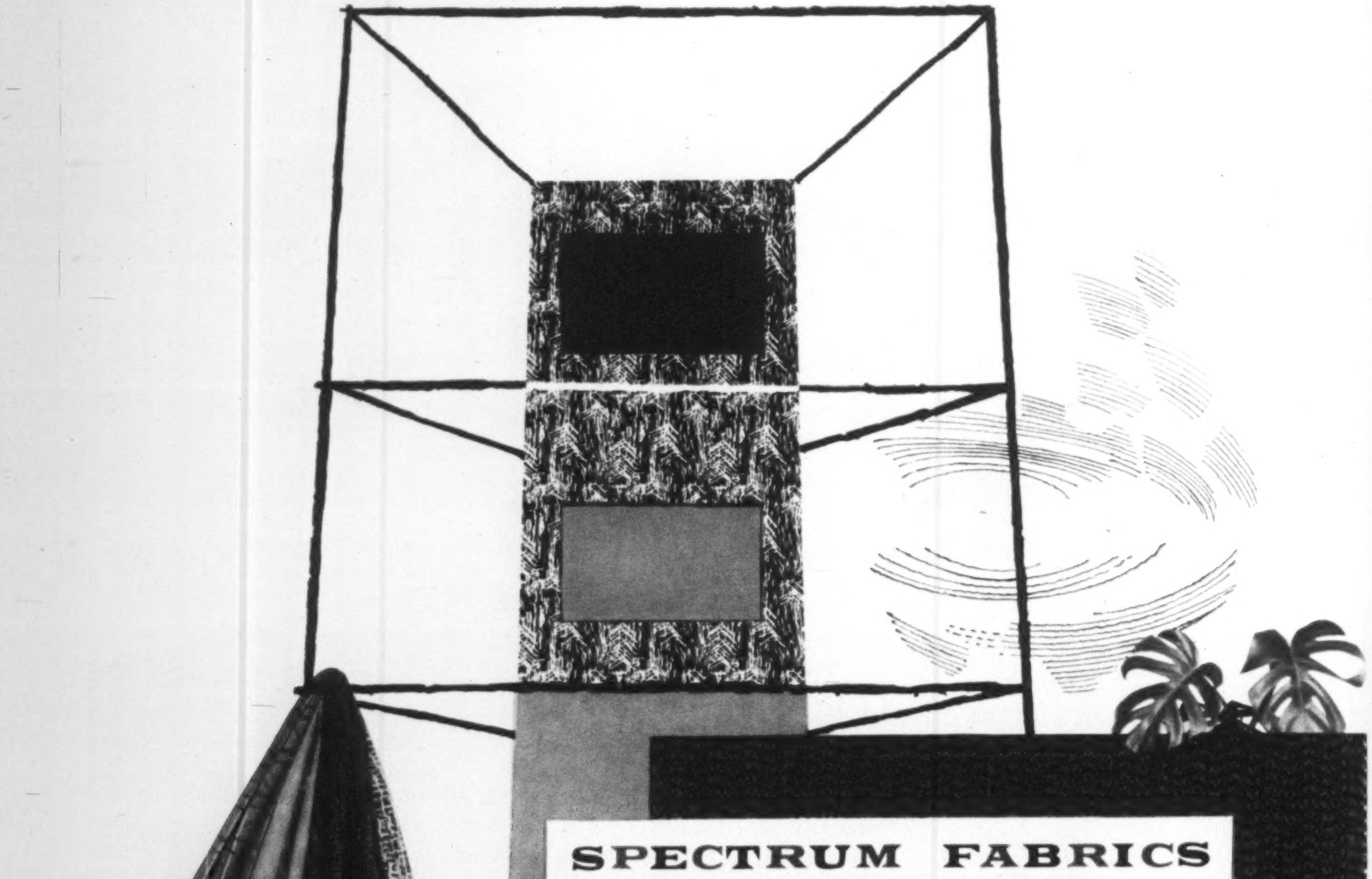

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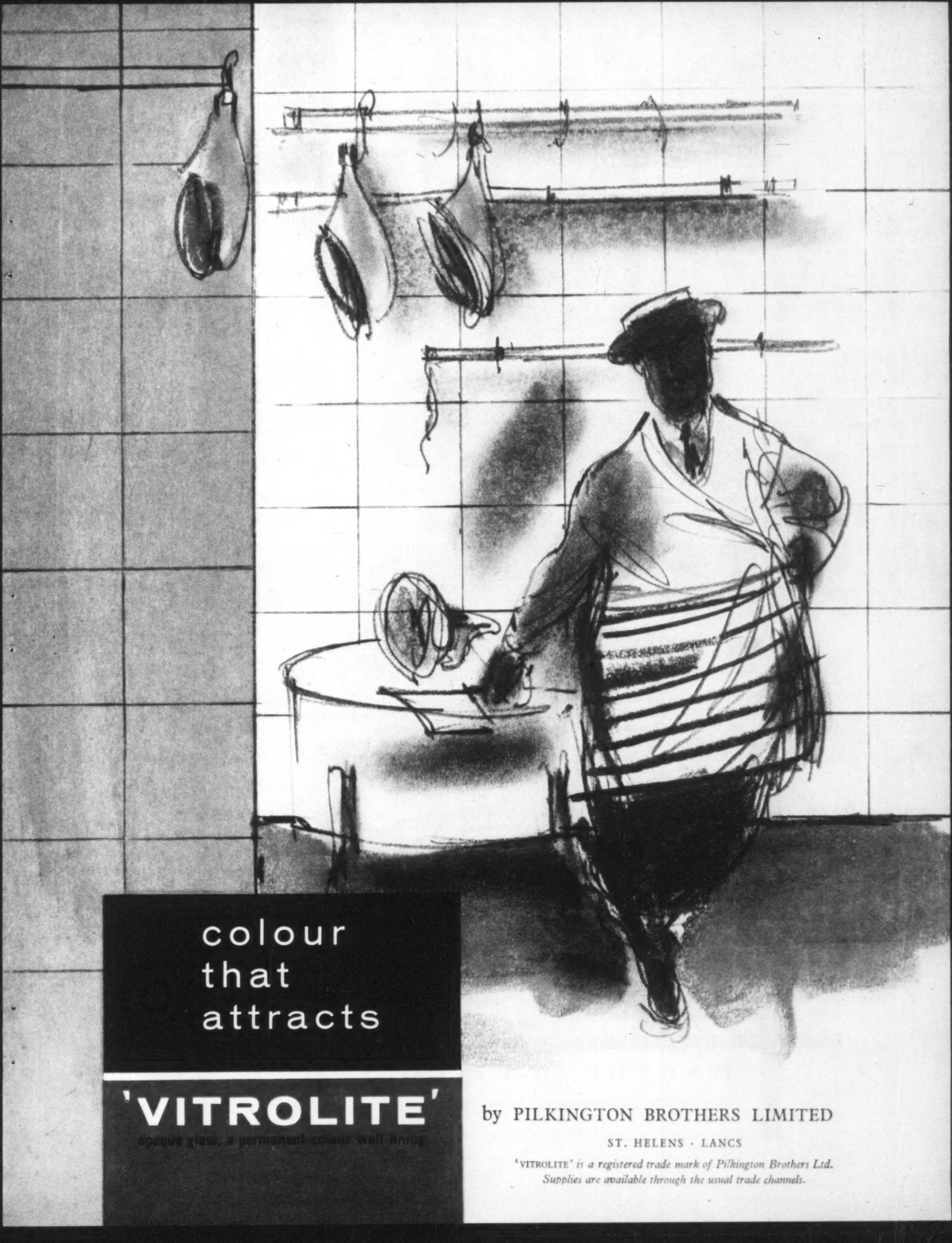

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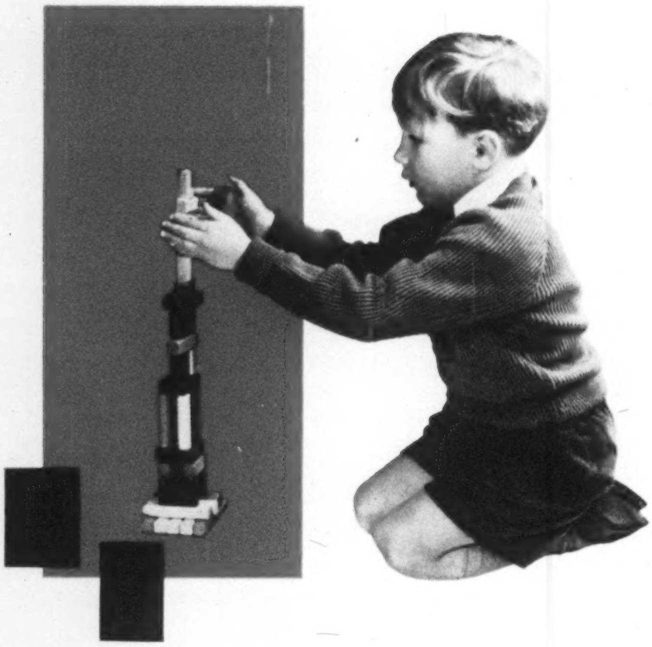

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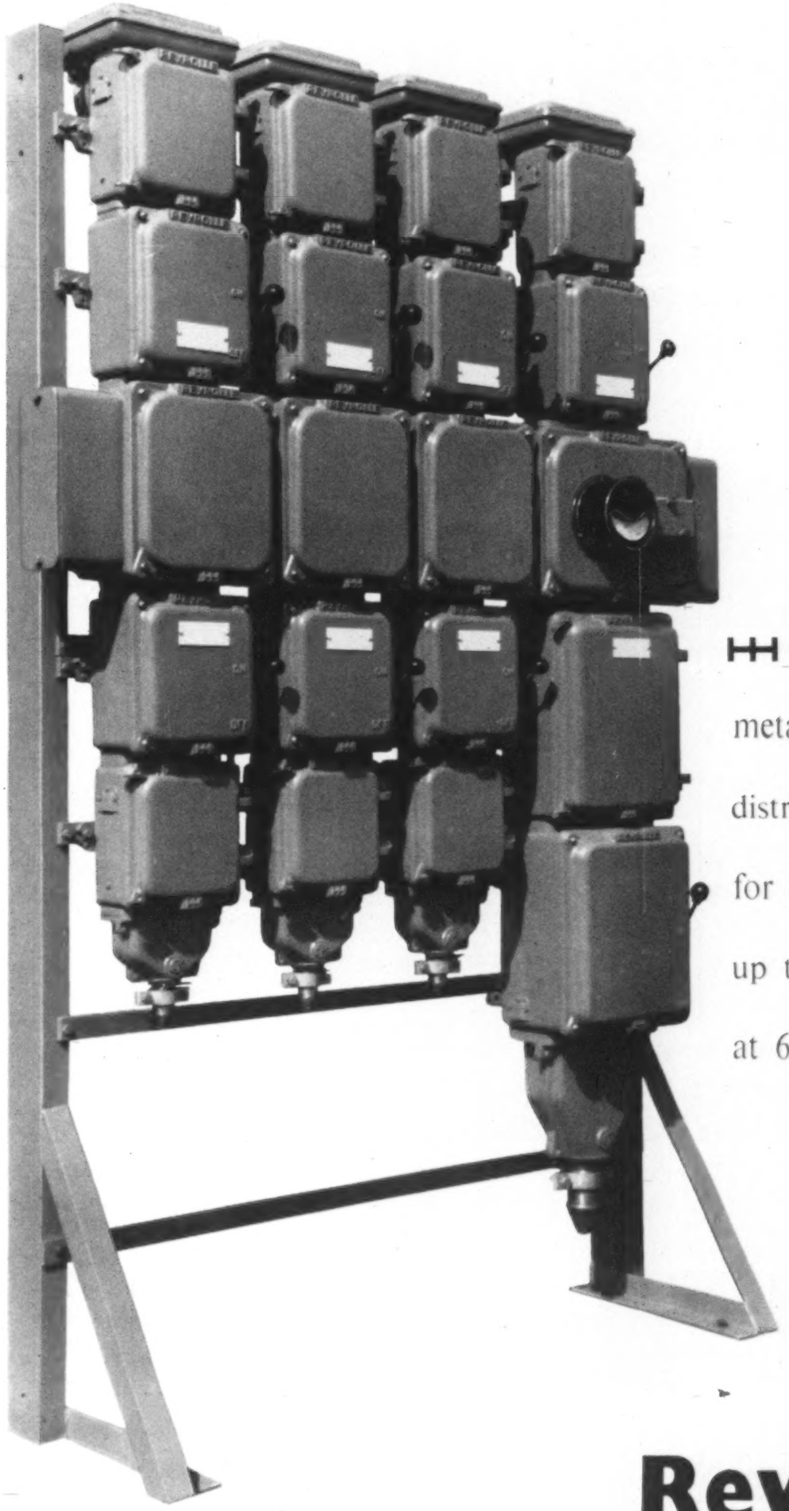

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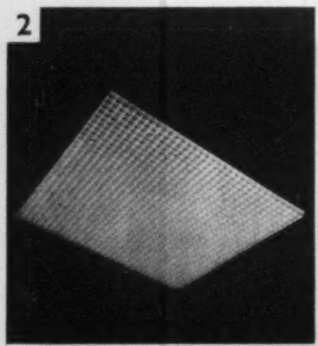

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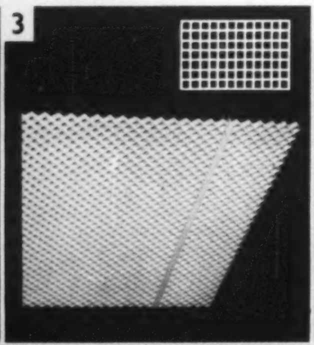

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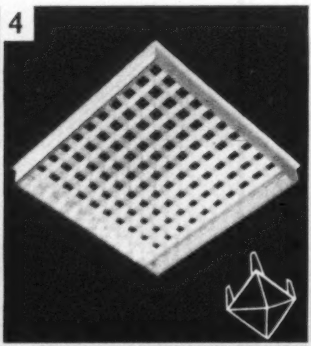

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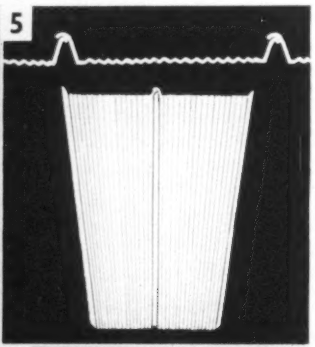

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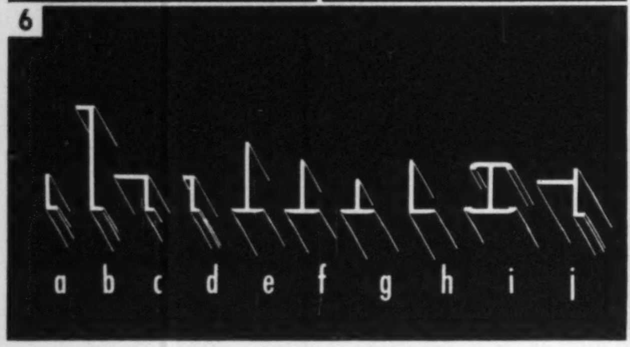

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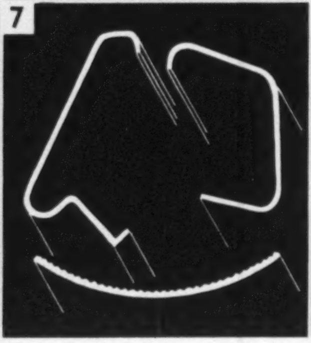

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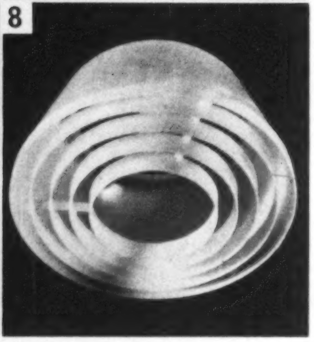

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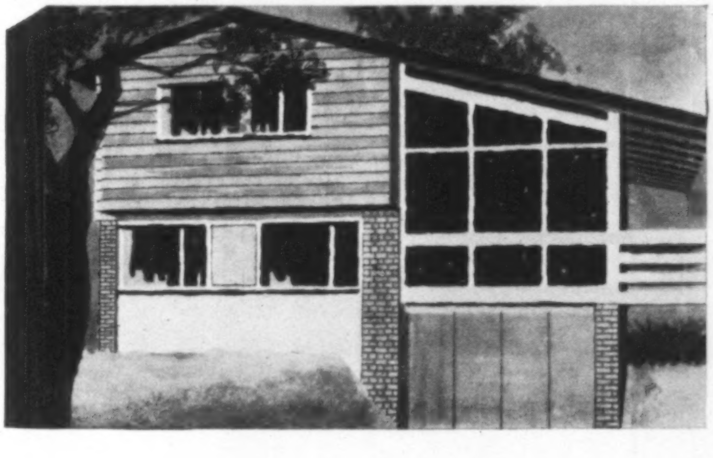
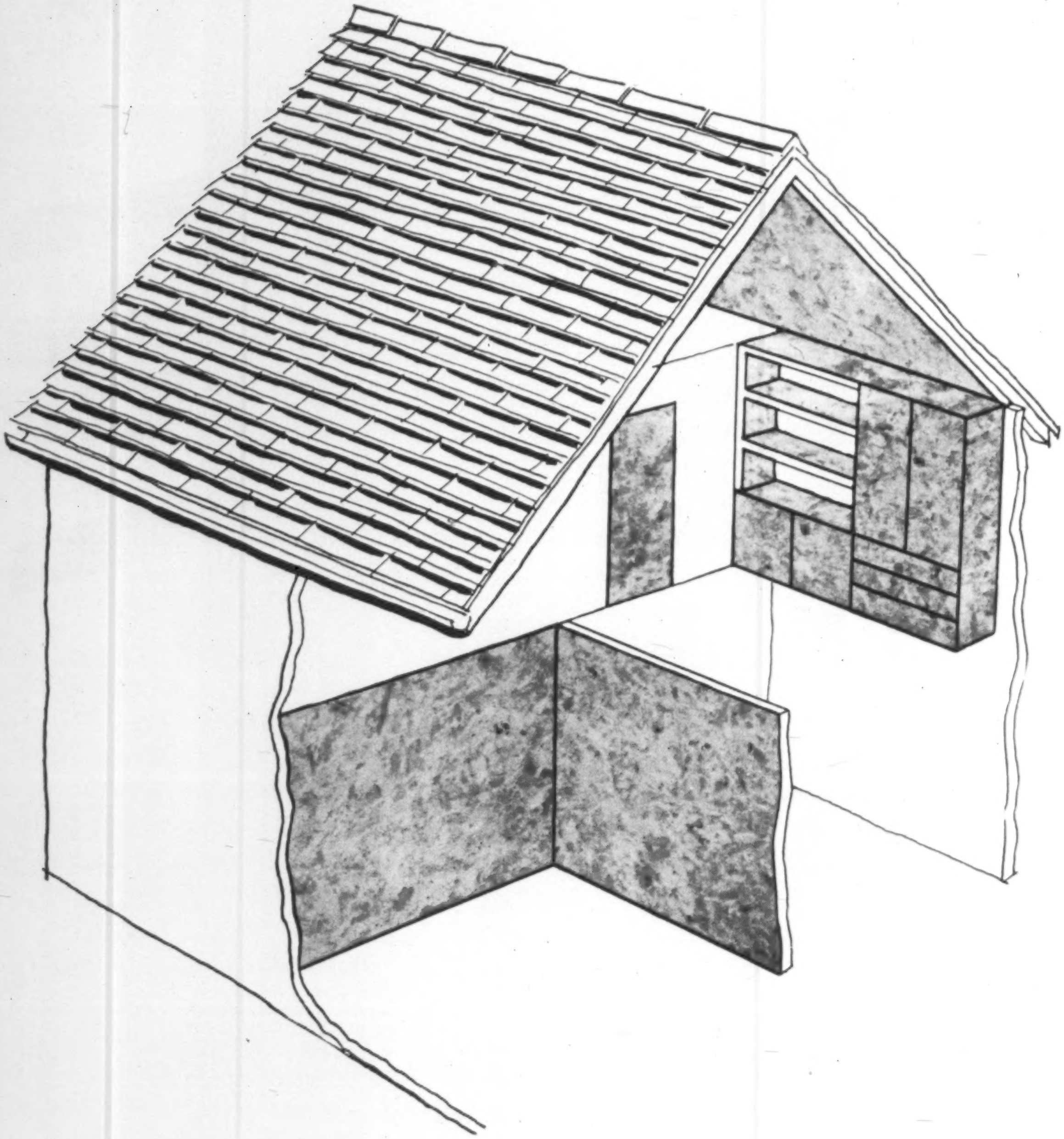

The Canada Trend House at the 1960 Ideal Home Exhibition



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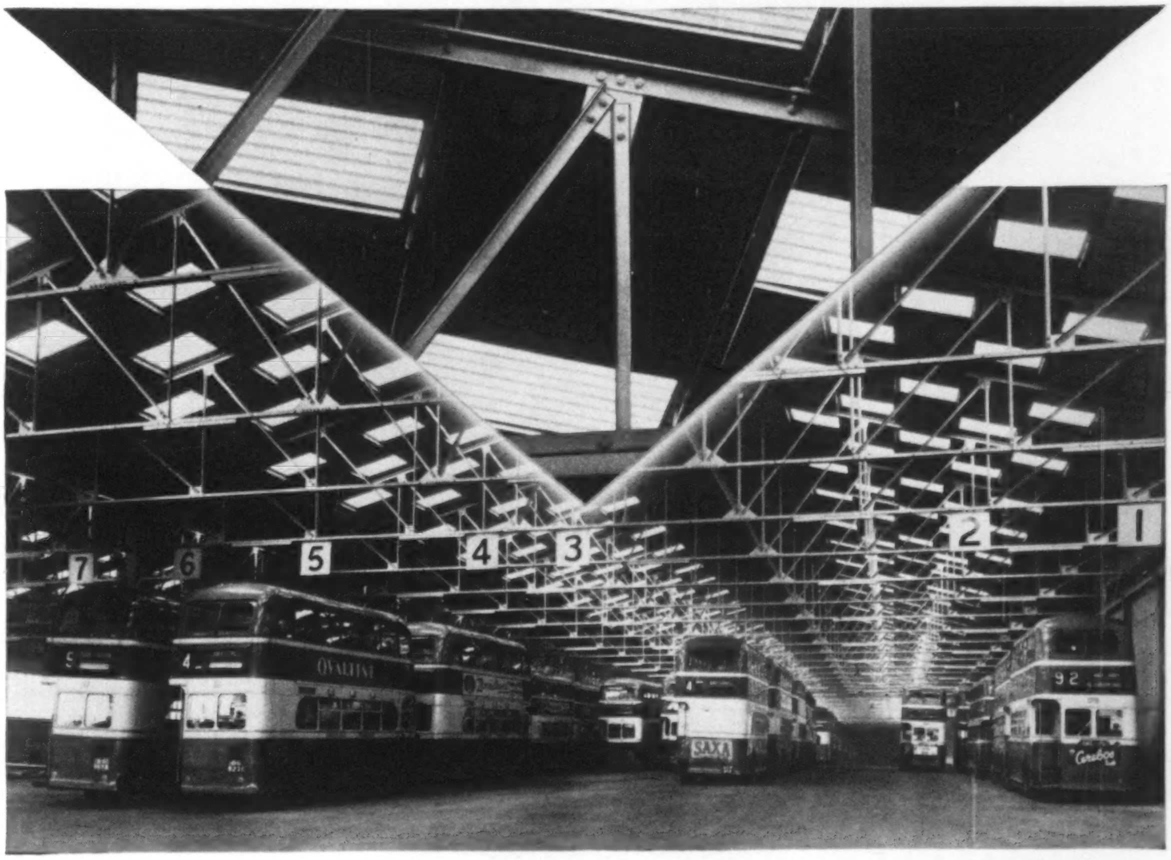

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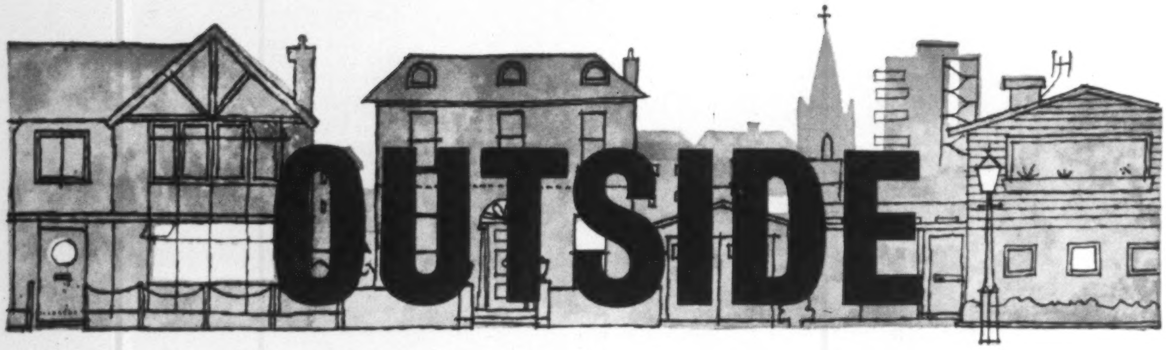

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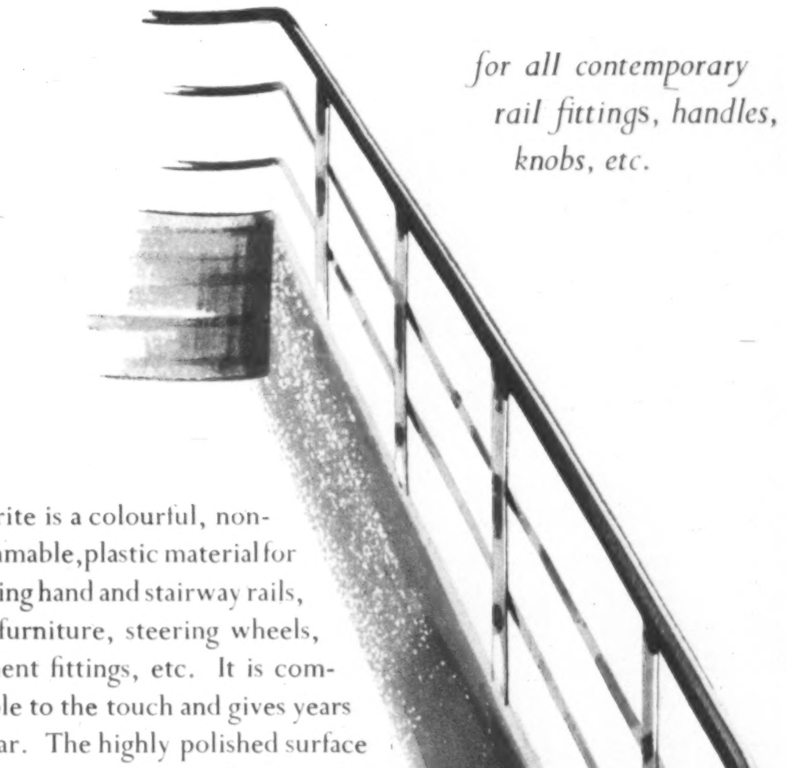

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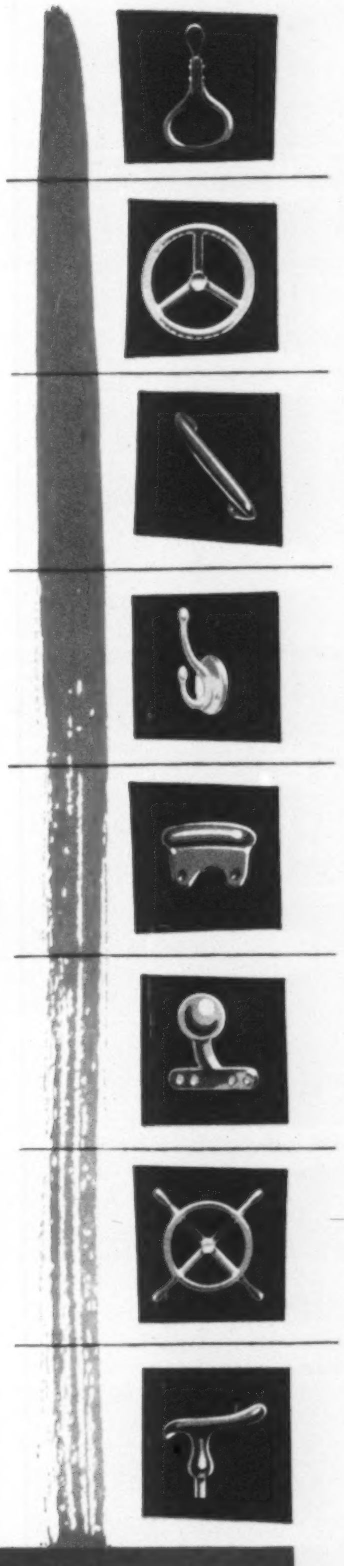

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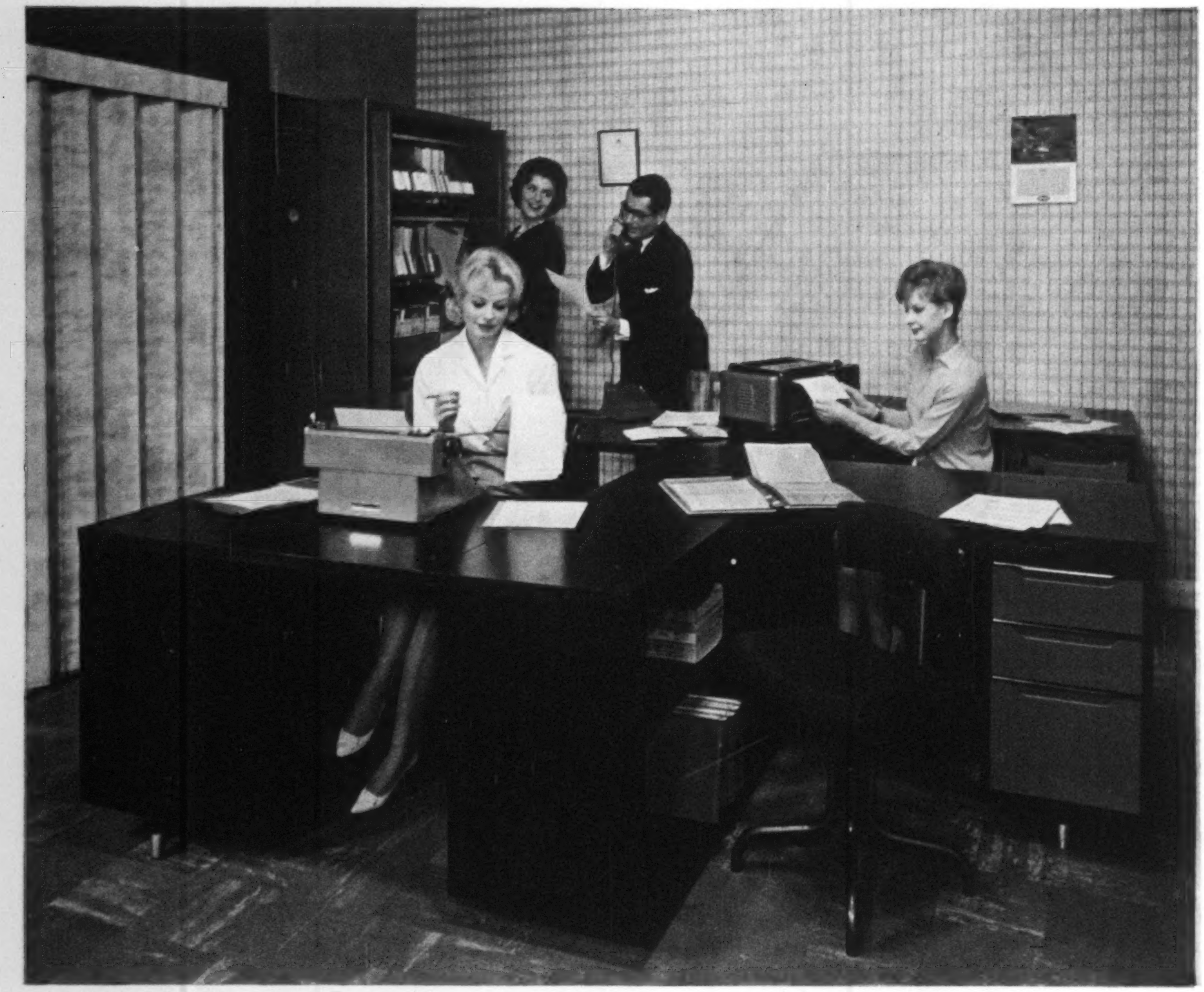

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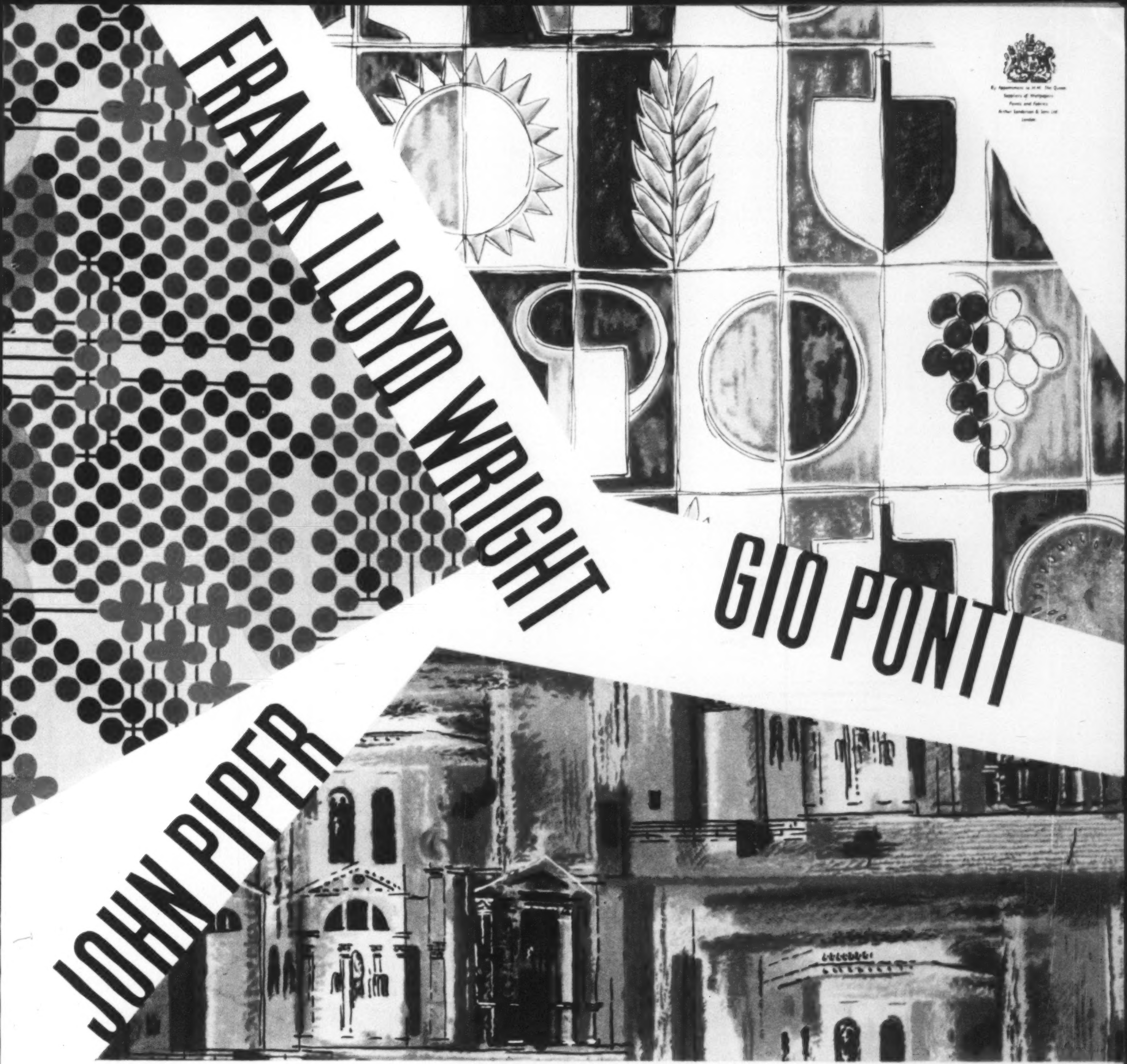

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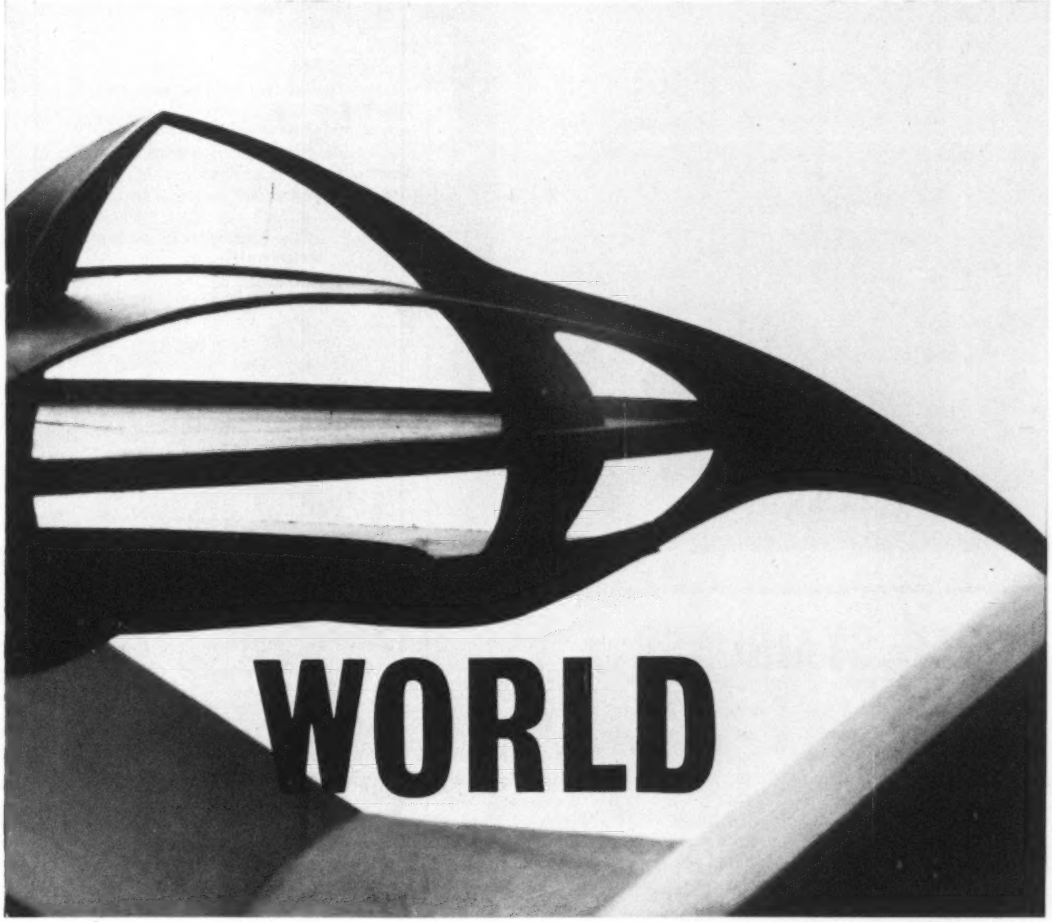
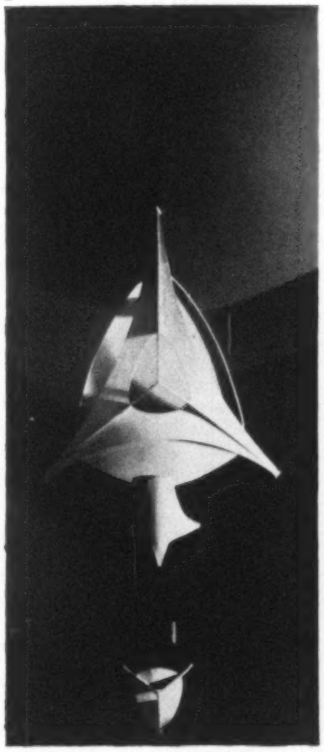


1

CANYON-SPAN RESTAURANT

in Californian National Park

2

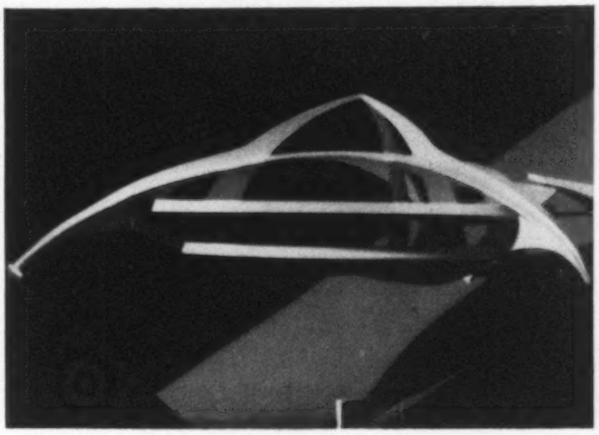


Looking at first sight more like one of the alien war machines in the Hollywood version of the *War of the Worlds*, than a building, the structure above, 1, is the skeleton of a proposed canyon-spanning restaurant in the Oakland National Park, California. Designed by Luckman and Cadwallader, it has in fact a symmetrical plan, 2, taking advantage of a curve in the canyon to secure three footings evenly spaced at the apices of an isosceles triangle. The apparent 'pendant' in this view represents the lines and engine house of a

funicular which gives acces
restaurant and the canyon fl
the Park Boulevard at the t
slope. In spite of the fact that
of the structure rises almost
the tope of the canyon wall,
restaurant hangs high enough
views of the sea which is som
away, the usable deck-spac
structure is still sunk dee
into the canyon to take adv
the shelter from the wind af
the configuration of the grou

In section, the project c
main cocktail lounge and
with outdoor dining-terrace

3



THE
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9-13 QUEEN ANNE'S GATE, WESTMINSTER,
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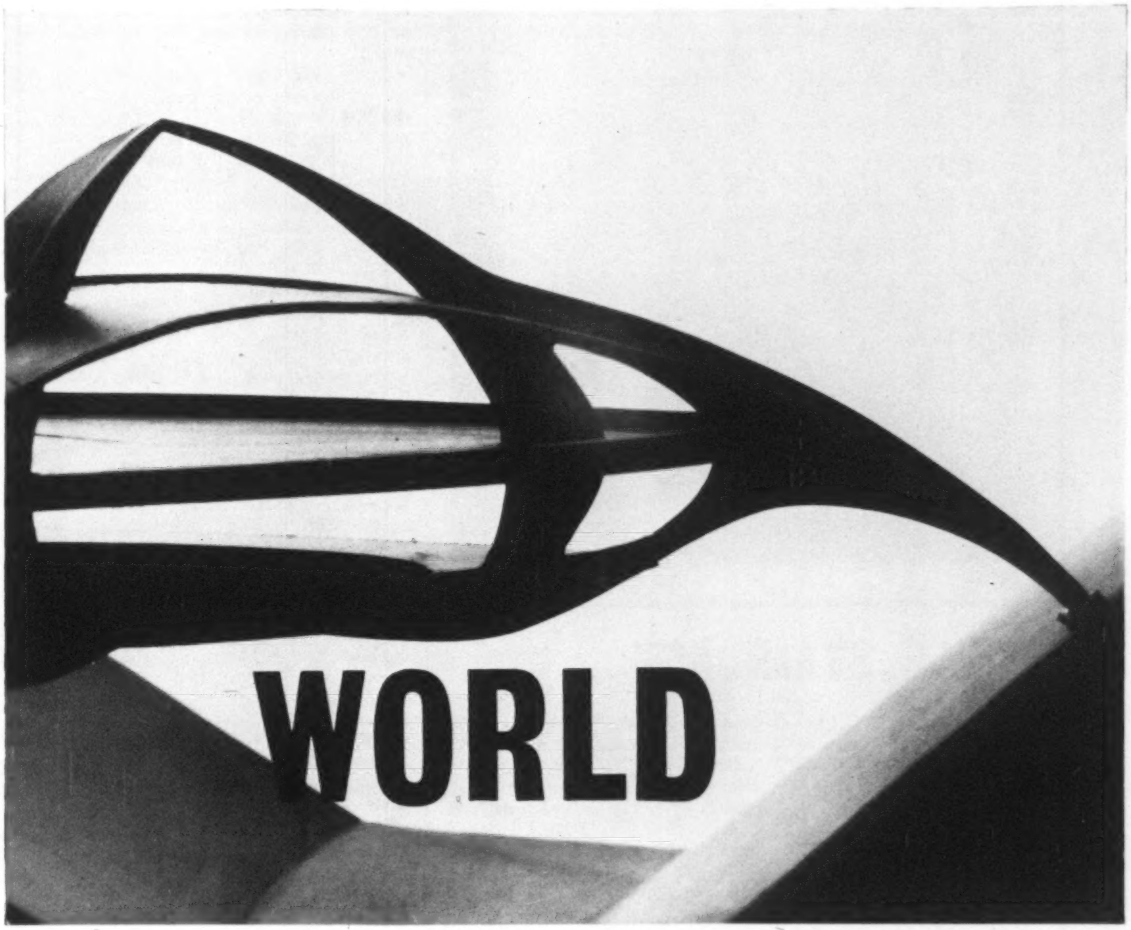


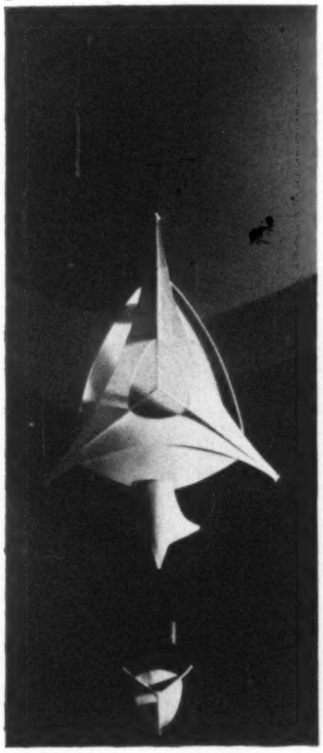
WORLD

1

CANYON-SPAN RESTAURANT

in Californian National Park

2



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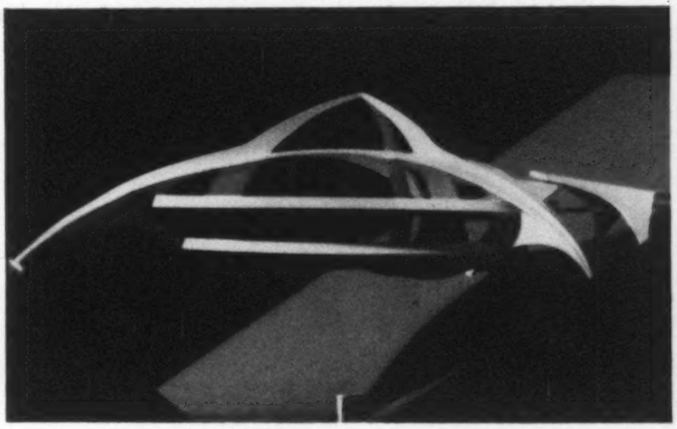
In section, the project calls for a main cocktail lounge and restaurant with outdoor dining-terraces on the upper deck, while the lower deck is to have a banqueting hall and complete club-house facilities for the golf-course in the valley below. The structure—inevitably—is reinforced and pre-stressed concrete, its tripod footings being considered capable of absorbing vertical movements of the ground due to 'normal' earthquake activity, though roller mountings are to be introduced to take up horizontal movements (it is not clear on what scale such movements are anticipated to be).

One final point will probably strike the thoughtful reader—even five years ago a project such as this would have been dismissed by most architects as mere fantasy or Expressionist Revivalism, but nowadays . . .? The changed response to designs such as this is a measure of the profundity of the revolution in architectural thinking wrought by the Candela-Torroja-Catalano connection.

3

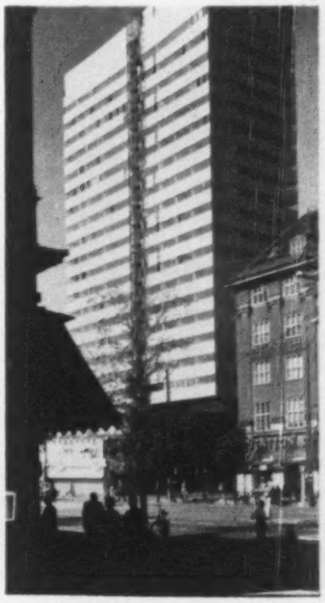


EUROPEAN CURTAIN-WALLS

Arne Jacobsen's *SAS* building in Copenhagen is now completed bar some details, and looks, as is so often the case with curtain-walled buildings, exactly like the model (cf. AR February 1959, p. 141). Nevertheless, Kidder Smith's photograph of the block nearing completion, 4, taken from exactly the same viewpoint as the standard photograph of the model, brings out some interesting points about this design when seen in the setting of the existing buildings around the site. Most notably, the easily read scale of the existing buildings greatly diminishes the apparent size of the tall block, which appears very lofty indeed in the model photographs, but turns out in fact to be more or less the standard bulk for European 'sky-scrapers' which increasingly tend to come in at around twenty storeys.

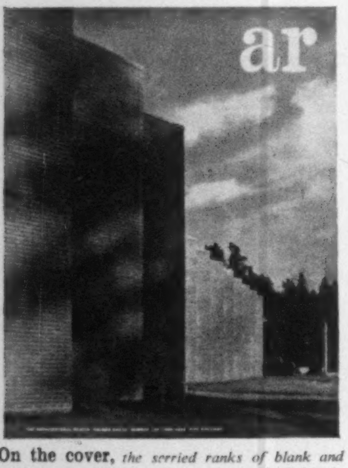
But one also observes, when one has the scale right, that the windows are uncommonly shallow for a curtain-

4

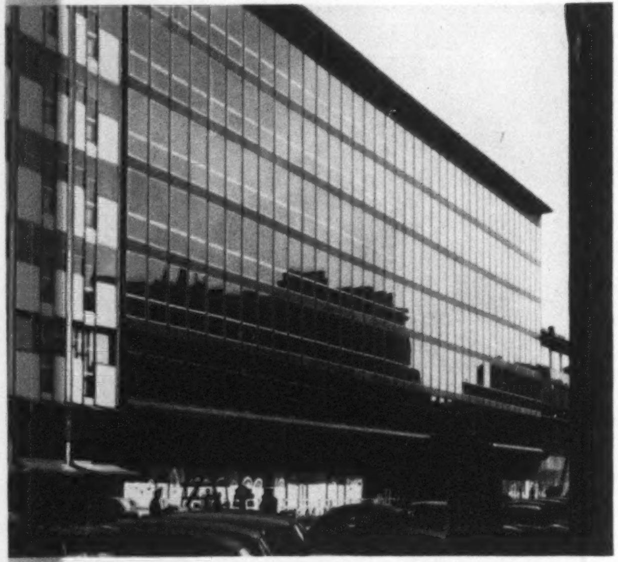


ACKNOWLEDGMENTS

COVER, Lennart Olson. WORLD, pp. 365–368: 1–3, Jules Kliot; 4, 5, G. E. Kidder Smith; 6, 18–20, Bauen-Wohnen; 7–9, Arkkitehti Arkitekten; 10–14, Casabella; 15, 16, Architectural Record; 17, Forum; 21–23, Nuovi Disegni per il Mobile Italiano. VIEWS AND REVIEWS, pp. 369–371: 1–3, Peter Bareham. FRONTISPIECE, p. 372: Royal Commission on Historic Monuments. TRAINING COLLEGE, LIDINGÖ, STOCKHOLM, pp. 376–380: 1–6, Lennart Olson; 7, G. E. Kidder Smith. THREE POWER STATIONS, pp. 389–395: Galwey Arphot. DURHAM ENDANGERED, pp. 396–404: map: reproduced from Ordnance Survey Map with the sanction of the Controller of HM Stationery Office. Crown Copyright reserved. 1, 3, 4, 6, 12, 15, 17–21, 23, 24, 28, 29, Daisy E. Edis; 2, Hunting Surveys; 5, 22, Thomas Sharp; 7–11, 13, 14, 16, 25–27, 30, Andor Gomme. INTERIOR DESIGN, pp. 405–409: 1, 3, 6–8, 11, 12, Byre Photography; 2, 5, 9, 10, 13, 15, Galwey Arphot; 4, 14, Banham Arphot. DESIGN REVIEW, p. 410: 1, W. T. Copeland and Sons; 2, Ernest Stevens; 3, 4, 6, Atlas Lighting; 5, General Electric Co.; 7, Bath Cabinet Makers; 8, Clyde Manufacturing Co.; 9, Kodak; all COID photographs. NEW LAMPS IN OLD STREETS, pp. 411–416: 1–3, 6–8, Toomey Arphot; 4, 9, 11, COID and Abacus Engineering; 5, COID, G. L. Blake and Kenneth Boyd; 10, COID and Metal Developments. CURRENT ARCHITECTURE, pp. 417–421: 1–5, Sam Lambert; 6, ICI; 7–9, Banham Arphot; 10, Sandersons. MISCELLANY, pp. 422–427: Exhibitions, 1, Arts Council of Great Britain; 2, 3, Marlborough Fine Art; 4, Pickard of Leeds; 6, James Mortimer; 8, Sydney W. Newbery. Obituary, 1, 2, Eric de Maré; 4, Sydney W. Newbery. Townscape, Ian McCallum. Travel, 1, Courtauld Institute of Art; 2, 3, Georgina Masson. THE INDUSTRY, pp. 429–434: 2, 3, Millar and Harris; 5, Pilkington Bros.; 7, Bowater Organization; 9, Studio Briggs; 10, Terence Wilson and Partners.



On the cover, *the serried ranks of blank and richly textured brick walls, unmistakably Baltic in their architectural quality and coniferous landscape, are the return faces of the projecting windows, sawtooth in plan, of the residential blocks of a new industrial education centre at Lidingö, near Stockholm, designed by Anders Tengbom. This impressive piece of collegiate planning by the bearer of a distinguished name in Swedish architecture, marks a divergence from the customary image of Swedish Modern current outside Scandinavia, and is described and illustrated on pp. 376-380.*



ISIBLE STAIRCASE

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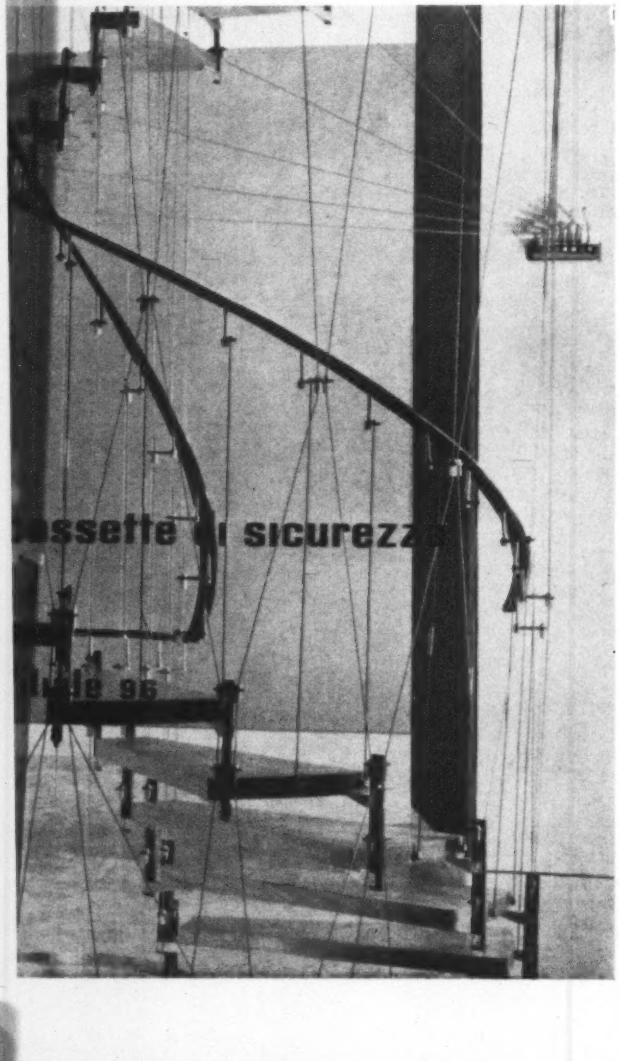


6

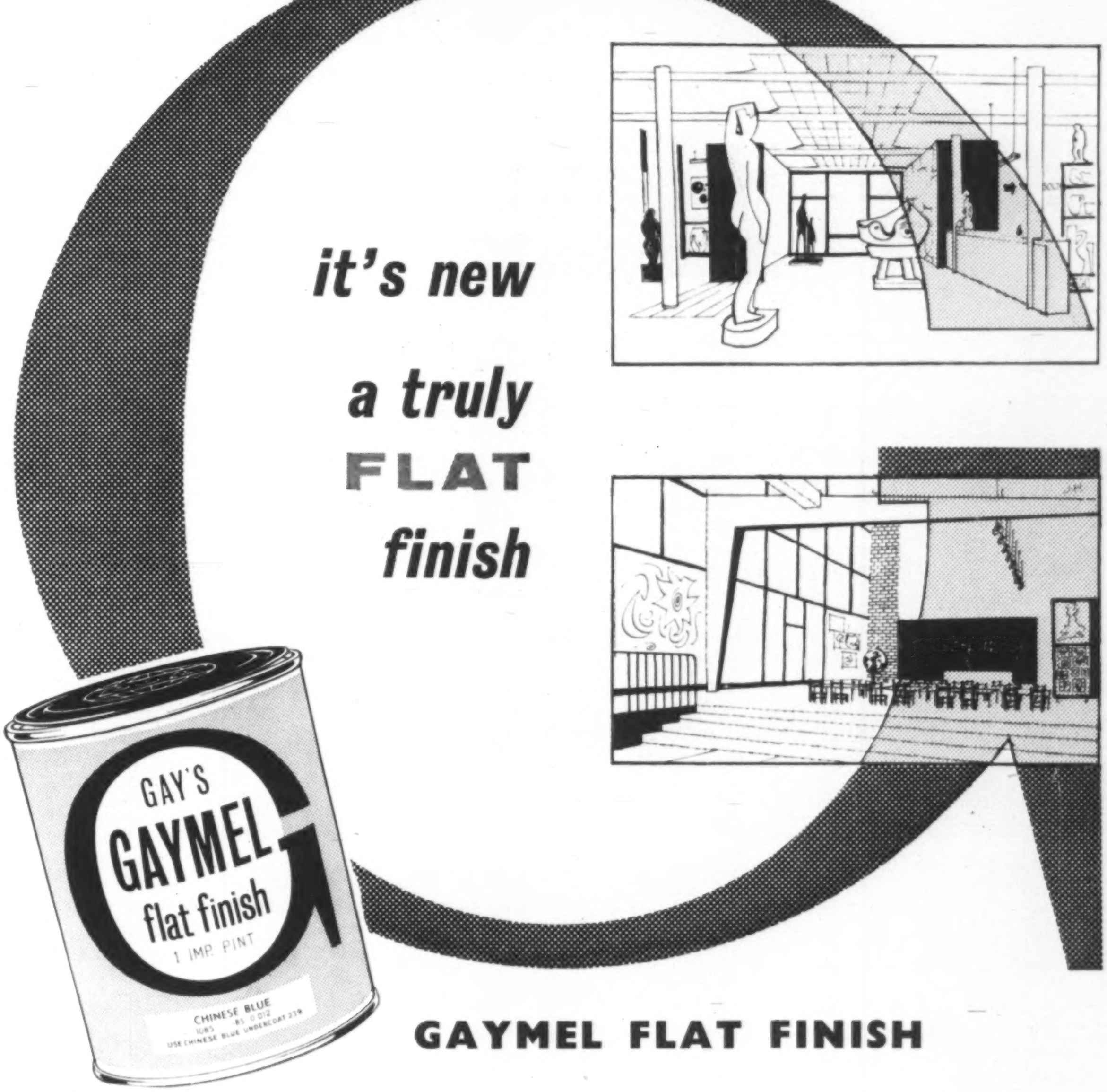
Designed by Renzo Zavanella, that past master of the *tensistruttura*, this brilliant piece of dematerialization is not intended as a solitary showpiece, but as the prototype of a number of staircases for new branches of the *Banco Popolare di Milano*, such as that at Varese, where the prototype is installed, 2. The usefulness of such a structure, involving the minimum of contact with the surrounding building, to an organization like the Banco Popolare which has to operate to some extent from converted premises where the leases may fall in within a few years, is clear enough (as Bauen-Wohnen pointed out when it illustrated this branch, in its February, 1960, issue).

But, in addition, the reader who compares this staircase with the uncompleted sculptures designed by Naum Gabo for the Esso Building in New York (AR, March, 1955) which this staircase startlingly resembles in elevation, though in nothing else, may well feel that here is the proper destination of those modern monuments, fully integrated with architecture, that the Constructivist movement (Gabo, Pevsner, etc.) have always wanted to create. Zavanella, who never appears to have been any sort of constructivist, has here achieved what Gabo just failed to do in his *de Bijenkorf* sculpture in Rotterdam.

CARRÉ *equals* SQUARE *but not* CARRÉ

Future pursuers of the Twentieth Century *zeitgeist* will have plenty of trouble with the word *square*. For reasons in which coincidence exceeds belief, the word now means *unprogressive* both in mental equipment and (quite independently) in the plastic arts as well. Thus, the Finnish periodical *Le Carré Bleu*, with its French title and its devotion to a particular body of aesthetic doctrine (pure form, integration of the arts) is as square in every sense of the word as its name would suggest, except that the current issue (4, 1959) carries a report by John Voelcker on the recent congress at Otterloo (cf. *World*, February 1960) at which the square and non-square factions collided, and shows other evidences of a more liberated attitude, as befits a magazine that enjoys support (apparently out of loyalty to 'the cause') from men like Ralph Erskine.

The squareness of squares in the plastic arts comes, of course, from their devotion to a Mondriaanesque rectangular aesthetic—now Out with the bright boys, but conspicuously In with the older group of Finnish modernists, who include not only Aulis Blomstedt, a figure very much connected with *Le Carré Bleu*, but also J. S. Siren, now in his seventy-first year, to whom *Arkkitehti-Arkitekten* recently devoted a congratulatory issue (8, 1959) illustrating works newly completed and projects on or off the drawing board. All exhibited a resolute squareness of plan—in some cases



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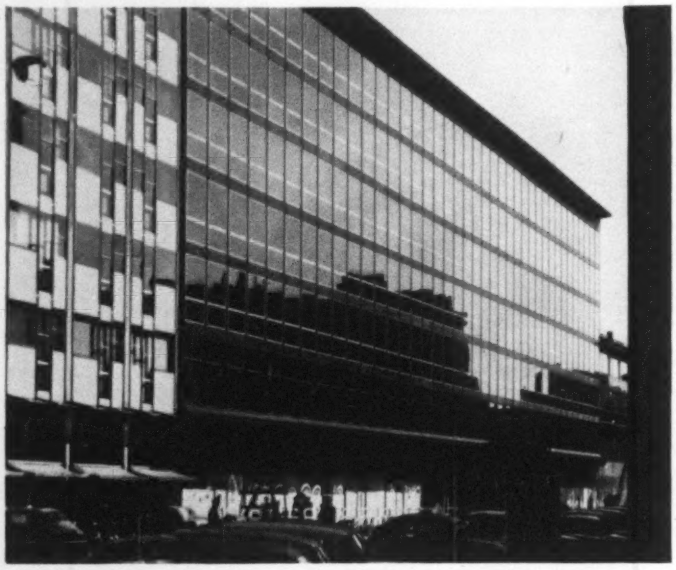
Curtain-Walls

walled office block in a northern city, and it would be interesting to know why this should be—has Jacobsen, for instance, given up the deep daylighting struggle in face of the problem of very short winter afternoons? In any case, the contrast with a southern, curtain-walled office block designed at about the same time, is very striking—Luigi Caccia-Dominioni's extremely impressive block in the Corso Europa, Milan, 5. Contrary to the general trend of 'advanced' North Italian architecture (even including the adjoining building with its up and down fenestration) the architect here makes virtues of all the more negative aspects of curtain walling, to produce an elevation whose studied lack of obvious character and marked projections, adds up to architecture as charged with character as the Seagram building. Also, as will be observed, the ratio of window to spandrel here reverses, almost exactly, that of the *SAS* building, to produce a design that one feels can never have deceived anyone about its scale. Finally, one must speculate about the ultimate contribution to the design of the cornice—a feature unknown in glass-skinned buildings since Willis Polk's Hallidie Building (AR May 1957). Though it is an affront to the orthodoxy of the glass-box aesthetic, the line of shadow that it draws across the top of the building makes a thought-provoking contrast to the way in which most curtain walls tail off vaguely into reflections of the sky.

5



INVISIBLE STAIRCASE

Many years ago, the futurist Azari, barely interrupting the flow of his routine mechanistic rhetoric, coined the idea of *invisible staircases in the upper air*. This subconscious recall of racial memories about Leonardo da Vinci's drawings of the flight of birds, was meant to apostrophize the movements of aircraft, but somehow the idea has got embedded in the professional psyche of modern architecture as something that could be actually built. The suspended staircase at General Motors Technical Centre was a step towards it, but now another Italian has got about as close to it as seems humanly possible, 1, without actually ceasing to have a staircase at all.

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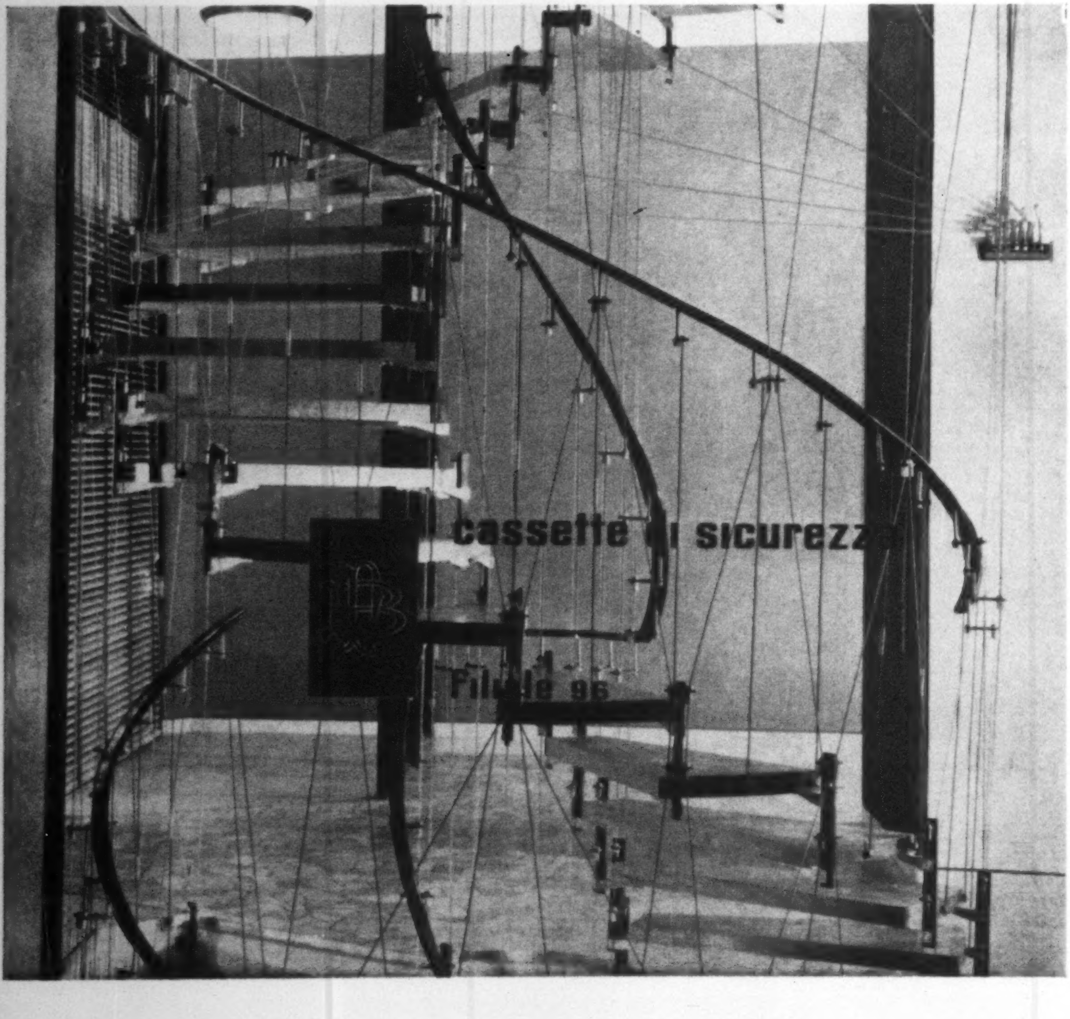

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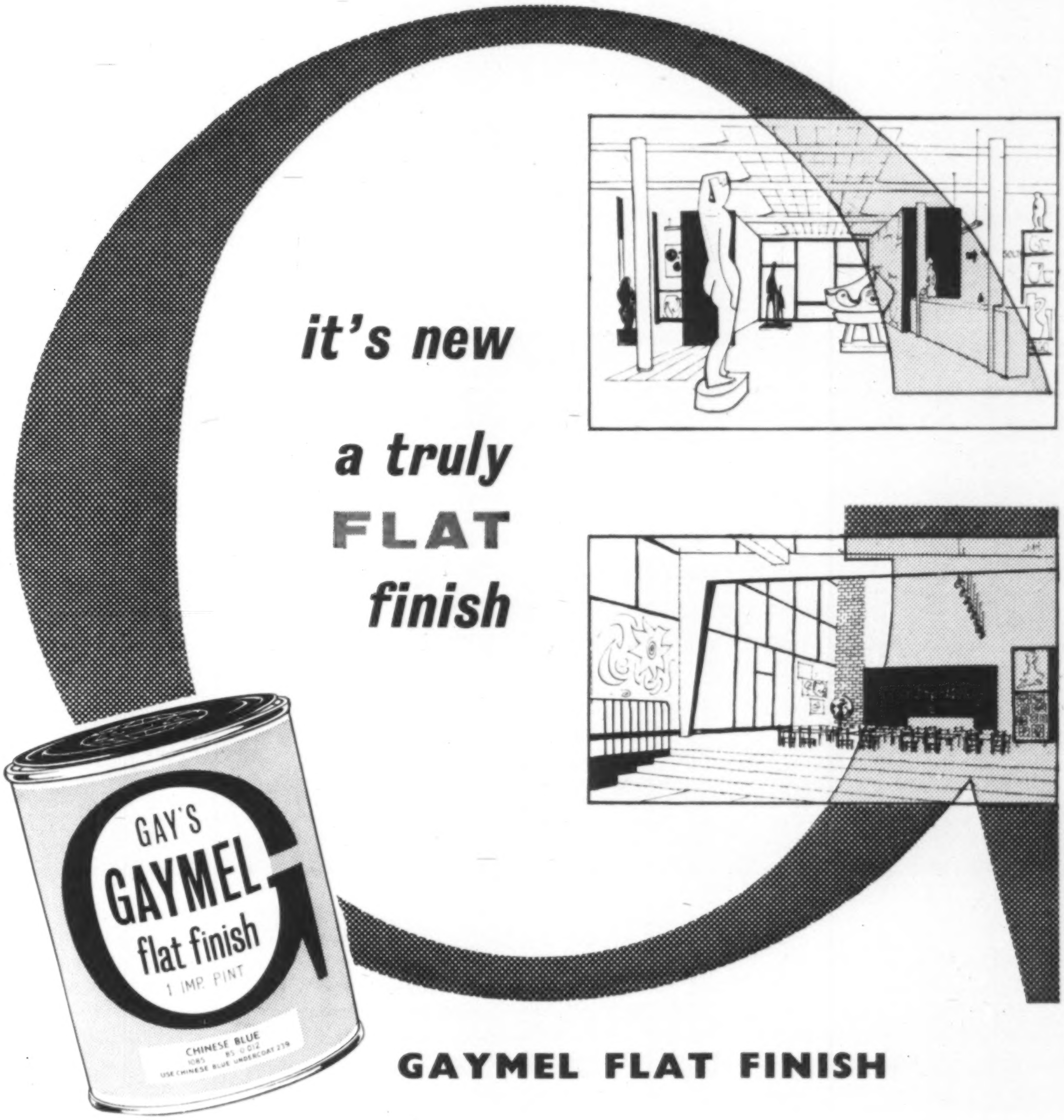

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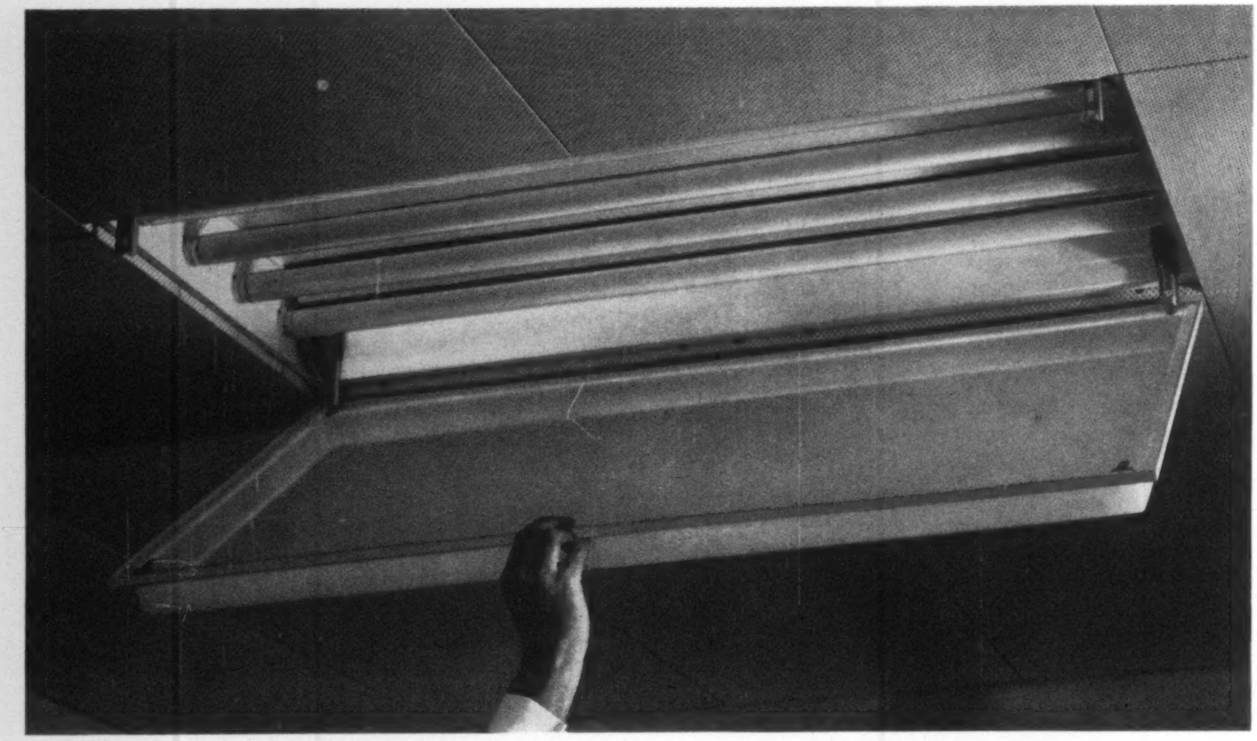

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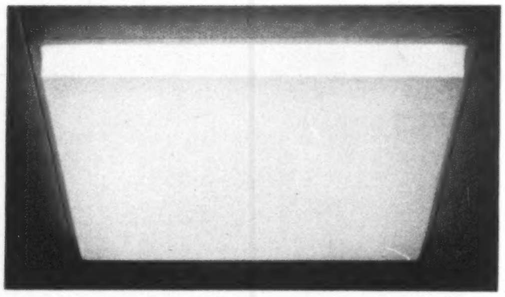

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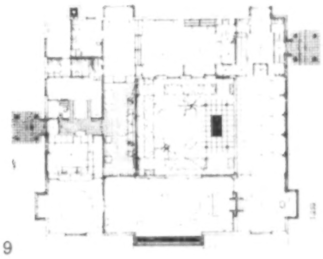
Square

literal squareness around a square internal courtyard, as with the project, 7, for the architect's own house, never built because (as *A-A* mysteriously says) 'the architect settled his housing problem in another way.' The design is a curious one, because the drawing-board symmetry of the facade, 8, does not correspond to any comparable symmetry of plan, 9, although one recognizes a very high degree of professional expertise about the composition—a kind of expertise that is to be found only rarely nowadays in non-Baltic Europe.

7

8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However, in the cultural heart of non-Baltic Europe, a Finn who is certainly no square in any sense of the word, Alvar Aalto, has just built a conspicuously non-square house with the misleading name *La Maison Carré*, 10. The name derives, in fact, from that of the owner, Louis Carré (who certainly cannot be described as a square in spite of his name), and the house has clearly taxed the mental agility of some of Aalto's southern anti-rationalist admirers. No curving walls here, as the plan shows, 11, no craggy brick surfaces—the walls have their lower courses faced in plain ashlaring, the upper parts in white painted brick, 12. The effect is remarkable and almost impossible to accommodate to the standard labels used for classifying the various ramifications of modern architecture. Leonardo Mosso, in *Casabella* (236, 1960) feels compelled to formulate his praises of the house in terms of quotations from Paul Valéry's *Eupalinos* (cf AR April 1958) and Baudelaire, and with the proposition that this is his first assay in 'Architecture latine.'

Although this proposition may be true in the sense that the house is planned round a central atrium, 13, the pure-form / Mediterranean-sensibility equation that appears to lurk beneath this proposition cannot be allowed to pass unchallenged. Preoccupation with pure form is a northern characteristic (Mies, Mondriaan . . . Arne Jacobsen . . . le Carré Bleu) in twentieth century art, while the Mediterranean has contributed impure formal languages (Futurism) rag-bag textures (Burri, Paolozzi) and architectural forms of cultivated sentimentality (Le Corbusier since Marseilles, Neoliberty, etc.). If the style of Aalto in the lush countryside of the Ile de France (the maison Carré is near Dreux) is comparable to anything other than the style of Aalto elsewhere, it is to certain aspects of the young Frank Lloyd Wright in Wisconsin, 14, and this proposition might, while not supporting flourishes of literary erudition like Mosso's, finally lead to an illumination concerning what this house (and other good modern villa architecture) is really all about.

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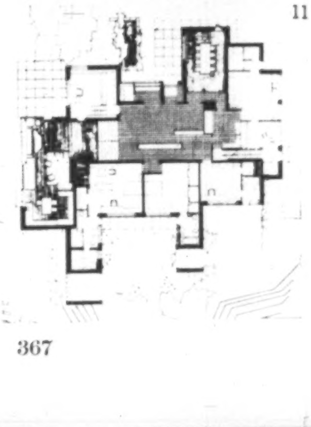

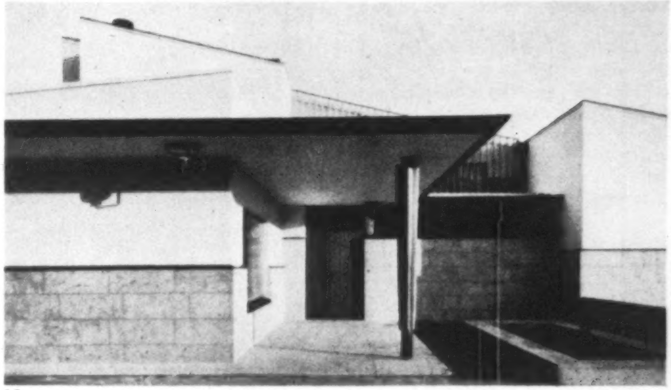
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13

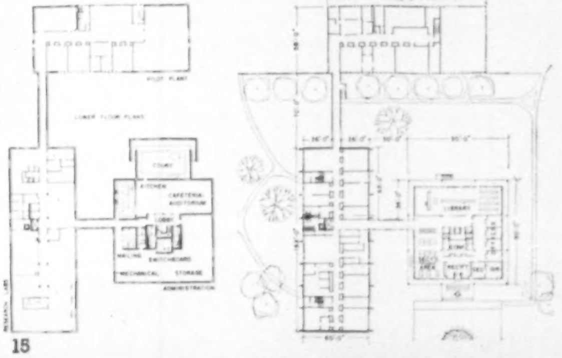
14

BRAND-IMAGE ARCHITECTURE

Pure architecture—Miesian pure—and academic research belong to one end of our cultural spectrum, and the hucksters' pitch of salesmanship, even with its new attributes of motivational research and brand-images and what not, belongs to the other end. Or does it? Two recent buildings for the proprietors of heavily-advertised American branded goods undermine this proposition even more explicitly than did the Mies/Johnson Seagram building.

For the Philip Morris tobacco company, Ulrich Franzen has just designed a miniaturized academic campus, 16, in a modernized Ivy League manner, with a plan that is modified collegiate, 15. Though this is intended chiefly for pure research into tobacco industry problems (it is situated in the tobacco-belt, a little way south of Richmond, Virginia) it is not thought of as being separated from the company's commercial programme, and *Architectural Record* (November 1959) noted that 'The buildings shown here are the beginnings of a projected long-range programme of this (viz., corporate image) type . . . Ulrich Franzen . . . as part of the philosophy of the programme, has prepared and executed a number of designs for the series of corporate graphics and symbols.'

Meanwhile, back on sophisticated



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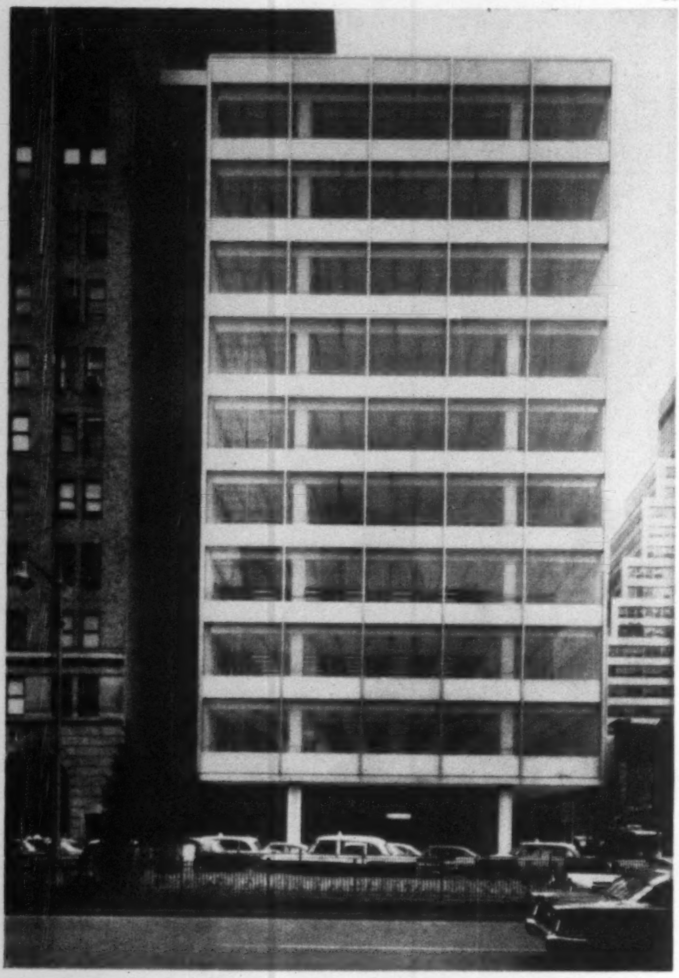
16

Brand-Image

Park Avenue, Pepsi-Cola (of all people) have produced (of all things) a soft-drink-Seagram, 17, executed in the most severe and sophisticated version of their 'high corporate aesthetic' by Skidmore, Owings and Merrill. *Architectural Forum,* unable (March 1960) to resist obvious quotations about 'Be sociable, look smart,' etc., also observed with justice that 'simplicity and scale lend Pepsi's building remarkable presence for its size' and this is undoubtedly true. The extremely spare design and very large units (each window is a pane nine feet by thirteen) make for a building that looks bigger than it is, contrary to the general run of curtain walled blocks (see 4 above).

17



SIPPLINGEN PUMP-HOUSE

The design of lakeside installations for water supply in Britain has become so repetitive a cause of complaint, that it is a pleasure to be able to break the monotony by illustrating the new plant at Sipplingen, 18, at the Überlinger end of Lake Constance. Besides the pump-house, this scheme by Hermann Blomeier also includes a decently unobtrusive intake building, 19, and another, resembling the pump-house in scale and general style, whose function is largely to screen from lakeside view the miscellaneous open-air switchgear and transformers that add so much to the squalor of most electrically operated plant.

The key to the high quality of the whole installation probably lies in the fact that Blomeier seems to have some sense of the magnitude of the alteration that he is effecting in the human environment of south-west Germany—the plant supplies water to Stuttgart, Ludwigsburg, Esslingen, Tübingen and other towns. At all events, the main machine room of the pump-house, 20, is rare among recent architect-designed works of this kind in re-capturing that splendid rhetoric of clinical order and suppressed horse-power that made this kind of installation one of the great inspiring themes of the heroic phase of Modern Architecture, and gave emotional force to the second part of Henry Adams's old tag about 'the Virgin or the Dynamo.'

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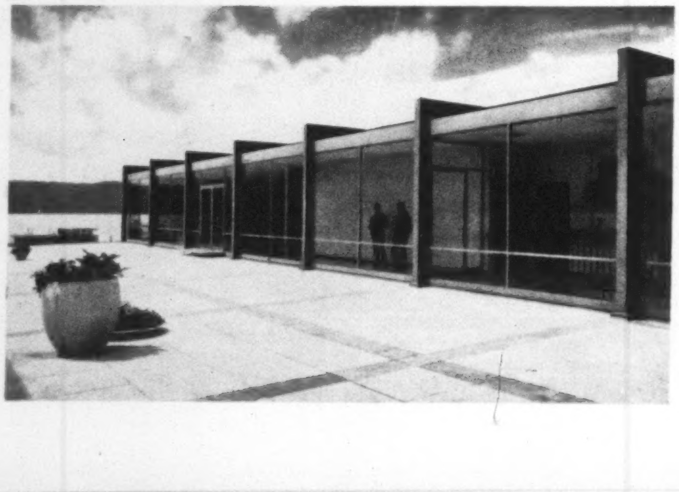
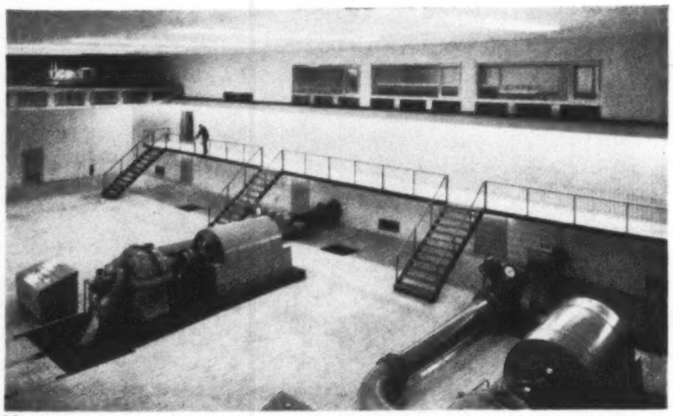


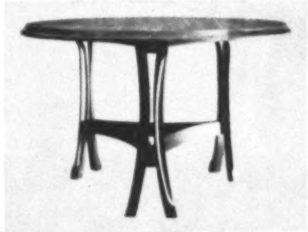


20

NEOLIBERTY FURNITURE

The Liberty craze (Neo- or otherwise) continues to provide marginal diversions on the lunatic fringe of Italian design—in the world of fashion pure and simple, the art nouveau fabric patterns that came from Liberty's in the first place, and thus provided the movement with its Italian name, have been revived in Italy, and now appear in the British press as the latest thing in Italian importations—with a rather baffling English name that seems to have been most commonly rationalized with the explanation that Liberty's must be the importers of the stuffs.

Meanwhile, back in the homeland of *Neo* liberty (cf. AR, April, 1959) and in accordance with the best art nouveau traditions of *Gesamtkunstwerk* (the whole environment by one designer) the founder-Neolibertarians have recently had an exhibition of the furniture their buildings deserve. Every important name in the movement is represented—Gabetti, Gregotti, Meneghetti, Aulenti, Rossi, Asti, Stoppino, and the rest—and so are most of the component influences of the style. Van de Velde's 'yacht' furniture finds a clear echo in a table by Asti and Favre, 21; something closer to the true Bugatti appears in the chest by Roberti Gabetti and Almaro Isola, 22. But in addition, plain common or garden *gusto milanese,* at its creepiest and worst, comes through in the revival of *le style Paris 1925* by Calvazaro and Tintori, 23.



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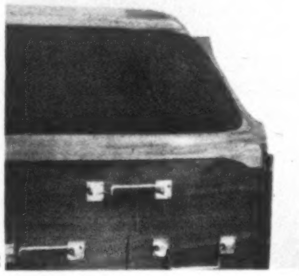

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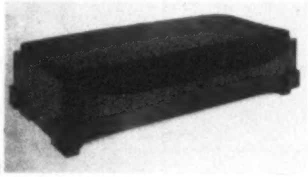

23

Before throwing up his hands, laughing it off, or deciding that it can't happen here, the British reader might do worse than look up the 'how not to' example that appeared in James Gowan's article on education in AR December 1959 (i.e. illus. 17, p. 319, or even illus. 35, p. 322) and ask themselves why a minority, but an intelligent, thinking, articulate, minority of younger architects is so determined to revive most of the things that modern architecture and industrial design are supposed to have buried for good.

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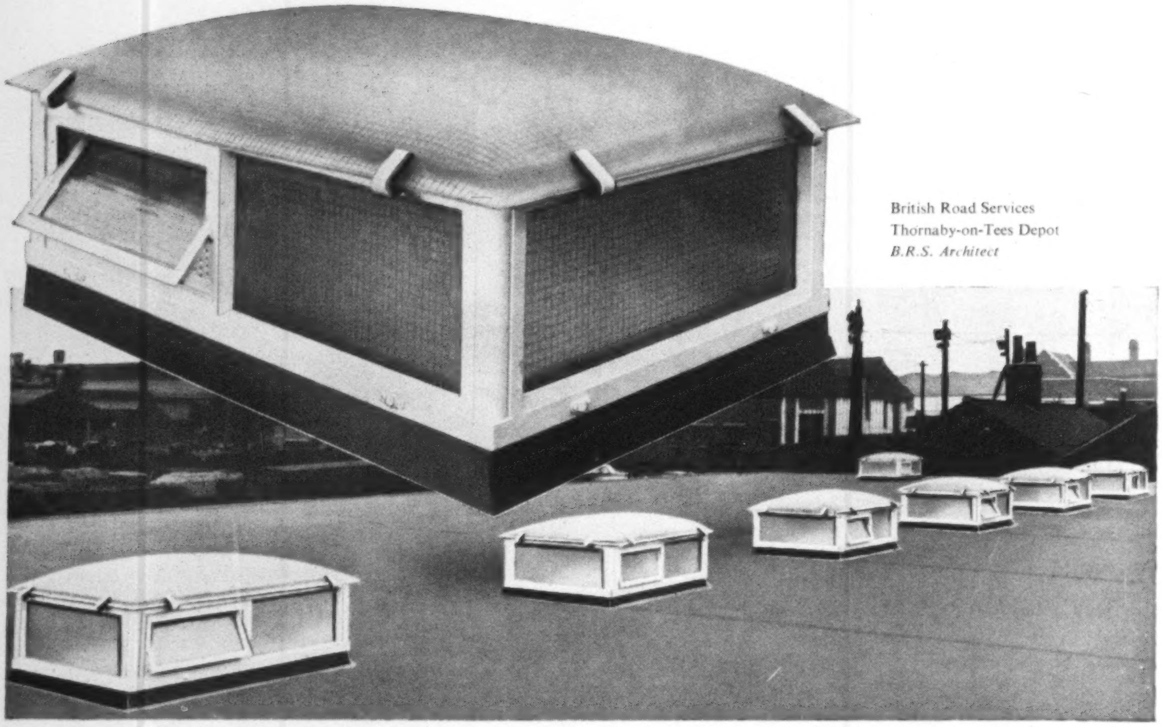

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CAMBRIDGE TO 1850

ROYAL COMMISSION ON HISTORICAL MONUMENTS—City of Cambridge. 2 *volumes, with maps; HMSO, 5gns.*

After a mere fifty years the Royal Commission is getting into its stride. They have succeeded in removing the absurd rule of inventorizing only buildings older than 1714, and the equally absurd rule of having to list every building of before that date. The one rule excluded about half of what is important in English art and architecture, the other forced the Commission into listing hundreds of cottages and farmhouses not worth the full treatment (over a hundred, e.g. in the parish of Felsted in Essex). The boundary in time had already been relaxed a little in the volume on Oxford and completely given up in the one on West Dorset, but even so the Commission, as its secretary recently disclosed, is busy on a second Oxford volume containing monuments of after 1714 only.

The Cambridge volumes, two and a box of large plans and maps, go resolutely as far as 1850. This is a tremendous step forward, and to express regret that William Morris at All Saints and Jesus College remains outside would be ungrateful. One interesting consequence of the new time limit already alluded to is that individual listing of every house has become impossible, and so Mr. Webb, the secretary, chose the convincing expedient of designating group monuments, i.e. of describing areas and only sample houses. As far as I could test in the field, it works very well.

There are other equally important and equally welcome innovations in these volumes, and they ought for once to be listed. To the lay reader the most striking is the illustrations. The Commission is at last waking up to the progress made in photographs for art books, and now many of the pictures are outstandingly fine—fine enough in fact to justify an exhibition of samples held at the Victoria and Albert Museum some time ago. What is more, the photographer has, as is so often the case nowadays, helped to discover completely new aspects of his subjects. The most spectacular case is the little figures on the stall ends of King's College Chapel, exquisite purely Mannerist figures which ought to make it possible to find the same hand at work in other places—hardly in England and most probably in France. For the stained glass of King's College Chapel colour plates were introduced—a doubtful blessing on the whole, but considering the fact that these windows are the most important of their date in England, justifiable.

Equally fundamental are the innovations in the text. The introduction has become a long and readable topographical history of Cambridge illustrated by well-drawn development plans. This is followed by a history of the university and its various building types and finally the customary survey of all kinds of fittings. Footnotes, often much needed, have appeared where they are needed, and original documents have been read and are quoted.

One *desideratum* in the introduction. It would have been helpful to try and trace the transition from colleges for fellows only to colleges for fellows and undergraduates. The terms scholars and students on p. lxxiv can only confuse. After all the fellows of Christ Church are to this day called students. Now a few queries, also relating to the introduction. For inner gatehouses, i.e. gatehouses between courts, Hampton Court might have been quoted as an earlier example, and the remark about gatehouses distinguishing the Cambridge from the Oxford tradition might have been qualified by referring to the gatehouse of New College, Oxford (and its counterpart at Winchester College).

Against such minor omissions there are the many little pleasures which no previous volume of the Commission would have harboured. The milestones set up beside the Trumpington Road from 1735 onwards were the first true milestones to be erected in Britain since Roman times. The signal-boxes near Chesterton Junction continue the tradition of the cottage orné, etc. There are larger issues too. The stagnation of Cambridge as a university as well as a town in the eighteenth century is brought out by statistics, a graph and plans. Matriculations averaged 450 in 1620, 450 again about 1825, etc., but between 1730 and 1805 never reached 200. Happy days. In fact here again the limitation to 1850 is a pity; for the growth immediately after 1850, when the Natural Science Tripos was inaugurated, is of great interest, too. By 1870 matriculations had in fact reached 610, and by 1880, 810. In 1950 alas, they were over 2,500.

The introduction appears anonymously, or semi-anonymously—as a compliment to teamwork no doubt, but depriving someone of credit who deserved it for an excellent piece of writing and perhaps various people of credit for pieces of specialized learning such as the account of the likely date of the Trumpington brass or of early cast iron or of early grey brick. The procedure of signing is in any case not consistent. The introduction to prehistory and up to 1066 is signed C.F.F. which one can guess means Sir Cyril Fox. The history of the city itself is signed G.F.W. which must be Mr. Webb. After that the signing stops. The editor of the volumes, Mr. Dufty, appears only once in a list of many people, and Mr. Webb, the *spiritus rector*, purely as the secretary to the Commission. There are incidentally other small inconsistencies which may deserve attention. For instance, I could discover no principle in mentioning or not mentioning artists' names in captions.

And while I am on suggestions for improvements beyond the enormous improvements of these volumes, I would plead for these. The plates should at last be together and at the end. I am not even sure that one could not have made out of the 310 of them and the introduction one volume for reading and a second of the 450 pages of text for handling while visiting. Those who try to do the latter will still be foxed by difficulties of arrangement which could be solved by a bolder, less discreet, typography. It is still hard to find where a new part of a college starts or where, in the long, far too little broken-up, lists of furnishings, say communion rails or panelling will be found.

And with this and with having paid my tribute to a supremely good job I come to my, to everybody's, real grudge. It refers to circumstances, as they say, outside the control of the Commission. The first volume appeared in 1910. After twenty years there were twelve. Now there are twenty-two. Ten volumes in thirty years, even granting that about ten of them were lean years, is ridiculous. Between West Dorset and Cambridge eight years went by. I am told gaps will not be so long in future. Even so, let us do some elementary calculations and see what comes out. Of the twenty-two volumes so far produced about twenty are, because of the limitation of 1714, short of half their necessary contents. That means another twenty at least. There are forty counties, or with Yorkshire counted as three ridings, forty-two. Of these eight are done and three more started. It is fair to assume that a county in future will need an average of four volumes. Thirty-four counties at four volumes, minus three published, makes 133. Am I a defeatist in reckoning that in future one volume will come out every four years? If I am right, the work of the Commission will be accomplished in 532 years. It is a funny prospect. What atom bombs have left will by then have much changed its appearance. Also the LCC's Roehampton housing will be as old as Queens' College is now.

Seriously—what is to be done? There is only one answer. At present, if I understand it rightly, the Commission works with a trained staff totalling about twenty. It is divided into teams working in different places, Cambridgeshire, York, Dorset, Wiltshire, Oxford. Before publication all must go through the hands of the one secretary who does the final summarizing. The teams ought to be increased to a hundred from twenty, and each team ought to be able to finish its own volumes independently. That would get us, on a basis of arithmetic only, to a hundred instead of five hundred years. In fact it might get us much further, and with the prospect of Commission volumes coming out every year the purpose of the presentation and the appreciation of monuments in this country would be served infinitely better, quite apart from the fact that the life of a second-hand compiler of inventories like myself would be bliss.

Nikolaus Pevsner

THE LAND AROUND TOWNS

AGRICULTURE & URBAN GROWTH. *By G. P. Wibberley. Michael Joseph. 21s.*

There are two ways of seeing urban growth; as a conflict between town and country, or as a finely calculated equilibrium of population densities which changes continually and differs, especially in a landscape as diverse as Britain's, from place to place. By tradition and habit the former view predominates (remember how the landowners fought to keep out development when the statutory development charge was 100 per cent). The latter view, yet with due regard for the power of the former, provides the basis for this book, which has been written with the aid of a team of research workers at Wye College.

Much information immediately useful and stimulating to architects, because it concerns size and scale, is contained in the text and tables: for example the uses of urban space are analysed, indicating that 42 per cent of the area of London County is occupied by housing, 15 per cent is open space, and 2 per cent is occupied by schools together with their playing fields. Later the dwelling plot itself is analysed to show that the house occupies 17-20 per cent of the site, and a chapter is devoted to the land-use and food production of private gardens.

The most important theme of the book is the survey of methods used to determine how and where urban centres should expand, and how this expansion might be compensated to ensure a desirable level of food production. The author makes it clear that the kind of information needed to reach such planning decisions is either not available or it is not available in useful form. Records of land-use are made by many different bodies with different and often marked interests. There is no doubt that land-use records should be compiled by a central body, and that the methods of measuring, classifying and tabulating should be overhauled thoroughly.

The author outlines a method through which alternative sites for urban growth can be evaluated in terms of gains and losses to society as a whole, pointing out that taking agricultural land for urban use is no more than a transfer account within the nation's economy. This method of evaluation is applied to the case of Lymm, Cheshire (a proposed settlement to take overspill from the Manchester conurbation), and the results are summarized in a 'Concept of Land Replacement' developed by Cheveley and Price. Briefly this Concept indicates that each acre of agricultural land taken for urban use should be balanced by an investment in reclaiming or intensifying agriculture. To amplify this concept the costs of different kinds of land improvement are tabulated in terms of the capital investment required to replace food lost and the anticipated return on the invested capital. It is worth noting that the cost of reclaiming land used for open cast coal or ironstone workings is almost prohibitive and the return on this cost is extremely low.

This book is encouraging because it confirms one's belief that urban growth is not beyond intelligent control; it is cautionary because it reveals that the present planning mechanism is inadequate and blind to its tasks. When many millions of pounds are being spent on agricultural improvement and urban expansion the author makes a plea for a few thousand pounds to be spent on research into how the money should be used.

John Voelcker

WATERWHEELS INTERNATIONAL

REPORT ON WATERMILLS. Volume III, Scale Drawings. *Edited by Anders Jespersen, Virum, Denmark. Published by Anders Jespersen*, 1957.

The slaughter of watermills and windmills proceeds at an ever increasing pace and it behoves all who can to record examples while they are still there to record. While the most obvious way to cover the ground is to take photographs and gather and collate information, nothing can really supplant the much more arduous method of making measured drawings. If these are done properly and with care, they are quite invaluable.

Fortunately a few ardent spirits have started to do this and to inspire others to copy their example. In the field of watermills no one has done more, internationally, than Mr. Anders Jespersen. His enthusiasm was first aroused by watermills in the Isle of Man and in Scotland during his training in the latter country and, since his return to Denmark, he has had the practical encouragement of his Government to an extent that makes his fellow workers in this field in England green with envy. The result is to be five volumes of which this one, Volume III, is the first to be published.

It contains measured drawings to a scale 1 to 100 and has a most useful card bookmarker printed with scales on either side. The drawings comprise seven German, twenty Danish, two British and three Norwegian watermills, two German, three Danish and one Greek windmill and two German horse mills. There are in addition measured drawings of the Laxey wheel, once used for pumping a mine in the Isle of Man, and a drawing of a wheel for a cloth mill at St. Marcello near Florence, Italy, made and constructed by Bryan Donkin in 1842. There are thirty-five pages of explanatory text in English with thirty-one photographs, two freehand drawings and a two-page map. The British mills are at Eversley and Sherfield-upon-Loddon, both in Hampshire.

The book is admirably produced by the rotoprint process which, as the editor remarks, alone makes it possible to produce it at all. Nothing like this has been done for watermills before and the drawings, which are the work of twenty-nine hands, are uniformly excellent. Not only are the mills and their machinery well recorded but also their siting and surroundings, a very commendable feature.

Rex Wailes

SPACE-INTERPRETERS

THE STUDY OF CITIES. Notes about the Hermeneutics of Urban Space. *Gregor Paulsson. Inter-disciplinary studies from the Scandinavian Summer University. Ejhar Munksgaard. Copenhagen*, 1959. *pp.* 92. *Price* 12 *Danish Kr.*

Gregor Paulsson was formerly professor of the history of art at Uppsala. In that capacity his studies were much concerned with the social background of works of art. Later, perhaps influenced by the detailed investigations of the Swedish school of urban geographers, he became interested in the complex functions and relationships that exist within a city, and to some extent may be said to be the city.

The Study of Cities is an attempt 'to find a perspective that is common to city investigations as a whole.' It was inspired by inter-disciplinary studies at the Scandinavian Summer University in 1957 when cities were examined as examples of very complicated structural wholes.

The book is short—about 30,000 words—and is easy to read in the sense that on every page it is quite clear what Professor Paulsson means. It is, however, difficult to read in that a number of highly condensed and refined views of a city—social, political, economic and psychological—are placed side by side, and the views are so various that two of them may have nothing in common save that both are concerned with some aspect of city functions and relationships.

Very broadly, the views of the city that are discussed are divisible into three groups: demands on space by certain urban functions; zones and sub-zones that have existed in certain towns; and social and psychological views of space. The author's great knowledge and skill are obvious in his choice of views. All are interesting and a number of them will be new to town planners and others who are professionally concerned with the ordering and improvement of spaces in cities. He pays special attention to social and psychological aspects of space.

The subtitle of the essay is *Notes on the Hermeneutics of Urban Space* and hermeneutics is the skill of interpretation. Professor Paulsson is concerned with all and every interpretation of urban space that seems valid and has unhurriedly gathered together a large range of examples. In his last chapter he does not so much try to sum up all that has gone before as to quote others who have tried to express the essence of cities. One finds, rather with relief, that this essence eludes exact description. It is a ferment, a state of mind, a character, a city has a soul . . . and so on. Professor Paulsson quotes Thorndike who tried to establish a 'goodness' rating for American cities and Augell who tried to find 'a set of common ends and values.'

The chapter tries to come to grips with this question of urban values, and in doing so becomes involved with problems of group psychology of greater and greater complexity.

H. Myles Wright

CORRESPONDENCE

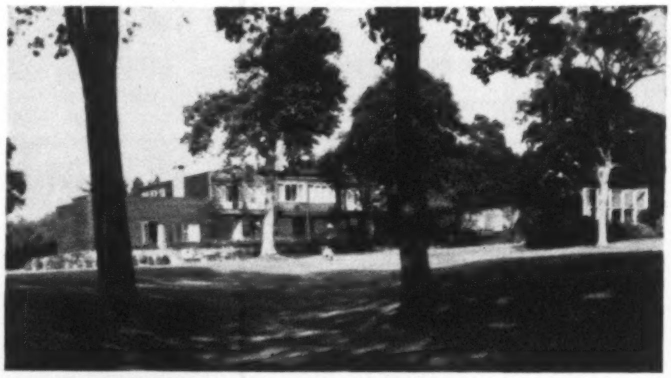
TIME AND CHERMAYEFF

To the Editors.

SIRS,—Dr. Nikolaus Pevsner's article on 'Time and Le Corbusier' (AR, March 1959) prompted me to visit a 'famous English villa of the thirties'—Serge Chermayeff's house at Halland, Sussex, built in 1938. This house was given a special coverage by you in February 1939, J. M. Richards mentioned it as 'pioneer work between the wars' and a recent Architectural Press book on gardens illustrates Christopher Tunnard's landscaping around the house.

The enclosed photographs show the house today. The view of the south elevation was taken in the same position as the photographs in the AR for February 1939. Note the games-room extension and its stack, the extension of the bedrooms on to the balcony in the middle two bays, and the disappearance of the Henry Moore sculpture.

Another photograph illustrates the rear of the games-room extension—compare this with the original illustration in the AR. The last photograph shows the north façade with the extension of the two-storey part of the house; this extension is visible on the south.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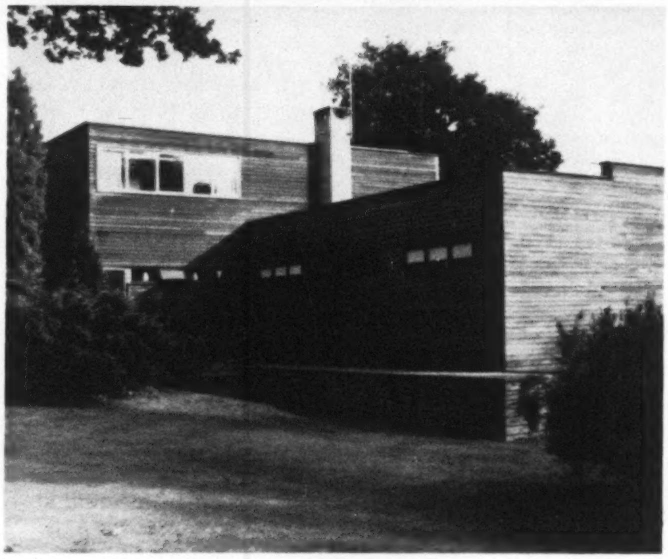
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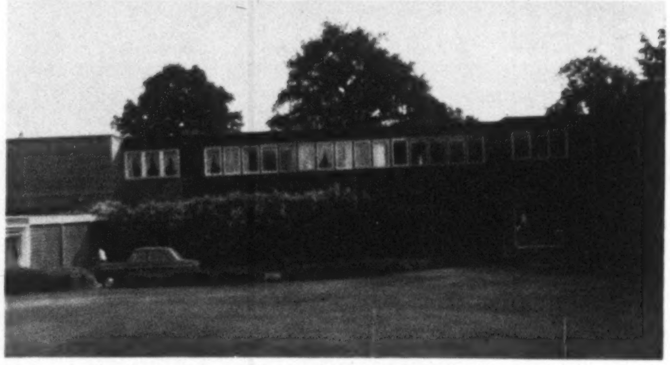
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1, the south front of Chermayeff's house at Halland in Sussex.
2, the games room extension.
3, the north front, all taken in 1959.

I was unable to photograph the 'stock' view of the south façade owing to the erection of an open-air swimming pool (echoing the plinth brickwork and screen) and the presence of the owners in the garden on whose privacy I did not wish to further intrude. The owners would not let me go inside the house because they said it had been entirely altered from the original.

Yours, etc.,
PETER BAREHAM.

Brighton.

UNIVERSAL MAN

To the Editors.

SIRS,—After reading 'Universal Man' (AR, April, 1960) could I say very simply that the first qualification for being a universal man is surely to become a Man. First and only. If one is, then it doesn't matter a damn by what paper title one is known, architect, engineer, town planner or business man. If one isn't, then everything one does will just be whistling in the dark.

On the day that 'every field of activity admits that the day of universal man is gone' then man himself is dead. On the day that nobody in the world feels 'an inherited mystique dating back to pre-technological times' then man is dead also. Man's own mortality is the surest proof that this mystique is not only inherited but permanent and ineradicable. The fact that the fingers that are writing this letter will eventually rot, stink and crumble into dust is—for me—something that is not fully covered in any technological handbook.

Yours, etc.,
IAN NAIRN.

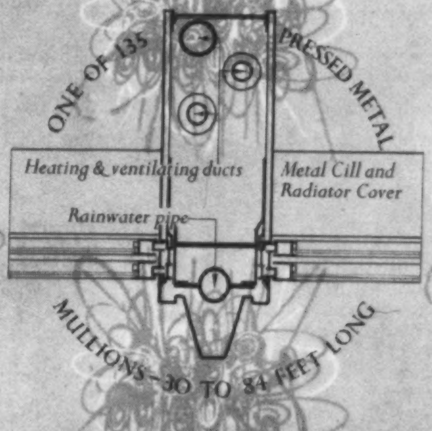
SANDERSON

NEW BUILDING, BERNERS STREET, LONDON, W.1

Slater and Uren, FF.R.I.B.A., Architects

HOPE'S WINDOW WALL

with aluminium double hung sliding sash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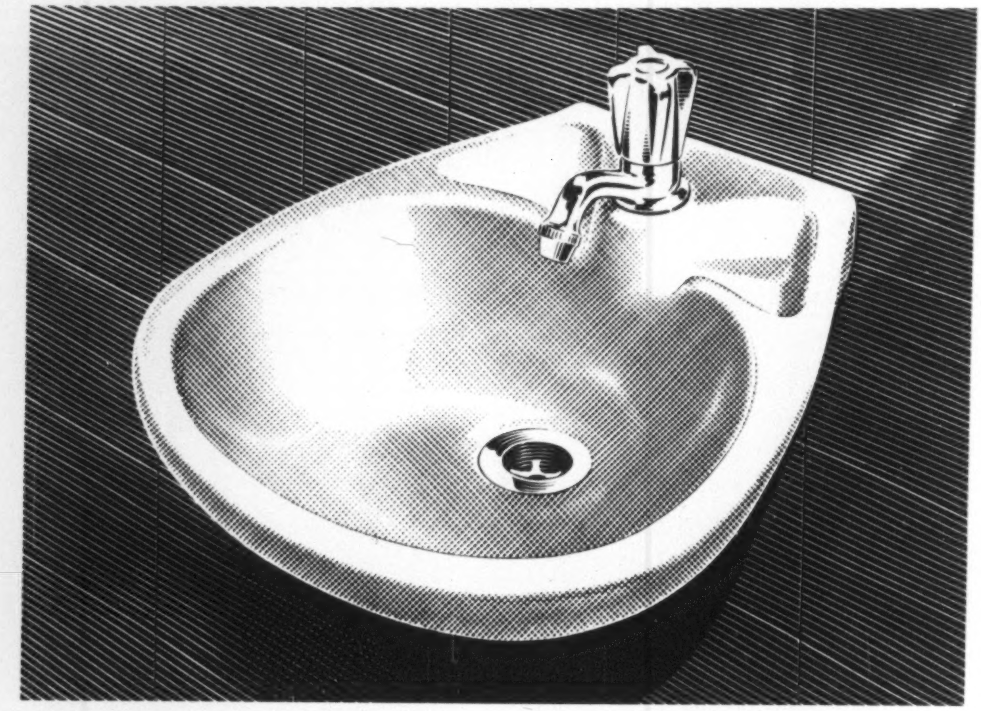
BACKGROUND BASED ON SANDERSON FABRIC DESIGN H346/1



a spray basin made in Vitreous China

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views and reviews

THE CLEANING OF LARGE BUILDINGS

To the Editors.

SIRS,—Referring to Lance Wright's article in the April edition of THE ARCHITECTURAL REVIEW in which he states that 'in most tall buildings external cleaning is the best' he ignores the fact that there is more than one surface to every sheet of glass. This means of course that whatever arrangements and costly facilities are laid on for external cleaning there still remains the internal surfaces to be considered and, to clean these from outside, although not impossible, is certainly impracticable. On the majority of buildings, therefore, arrangements have to be made for the internal surfaces to be cleaned with the minimum amount of inconvenience to office staff either by (*a*) carrying out this work after office hours or (*b*) locating office equipment and/or any other obstruction clear of the window areas.

The outcome of this piece of strategy is that if the external surfaces can be cleaned simultaneously a considerable saving can be made initially by dispensing with roof mounted external elevators, etc., and over a period by a general reduction in labour costs.

Lance Wright's objection to the amount of room required to rotate a 180 degree Carda window depends largely on the size and proportion of unit involved coupled with the layout of internal furniture and fittings. By careful planning and consultation this is easily overcome, however, especially when it is considered that sufficient space would have to be allowed for gaining access to the internal glass surfaces whatever cleaning system is to be adopted.

While it is agreed that the Carda window does not solve every fenestration problem, systems of curtain walling can be supplied where all maintenance can be carried out from within, contrary to Wright's suggestion, and, providing that the specialist is consulted during the early design stages of a contract, there are few problems in fenestration that are unsurmountable whether single or double glazing is being considered.

Yours, etc.,
D. G. GENTLE,
Technical Representative.
Holcon Ltd.,
Slough.

Lance Wright replies—

The article was concerned with the cleaning of *tall* buildings and particularly with those of non-traditional construction (as tall buildings almost always are). The critical point with these is that the frame stands in as much need of attention as the window itself. Although, as Mr. Gentle points out, it is a comparatively easy matter to design a window so that it can be cleaned from the inside, it is not so easy to arrange for the structural frame to be dealt with in the same way. Even though it may be possible to clean frames from the inside, it will always be physically difficult and, as a result, parts are sure to get skimped. Nor is cleaning all. The majority of our tall curtain wall structures rely on sealing compounds, gaskets and tapes which have to be renewed at fairly frequent intervals. There seems a strong case for designing a wall which can be cleaned and maintained by using a single contraption.

THE MINDLESS MASTER

To the Editors.

SIRS,—We in SPUR feel that Ian Nairn has for once entirely missed the point in the article on urban motor traffic in your April issue in which, with the effect of motorways on American cities very much in mind, he advocates 'removing the bottlenecks, giving as even a flow as possible on the existing system and allowing *laissez faire* to take over.'

The main object of new construction, is not, as he seems to assume, to appease the motorist, but to rescue the pedestrian, and give him back the spaces motor traffic has stolen from him. Diagrammatically, this means closing the market place to vehicles and taking them round the back. Mr. Nairn is probably right in thinking that new roads, whatever their size, will always run full bore, and so they should, provided pedestrians are somewhere else. It is a question of segregation.

Secondly, we think that Mr. Nairn overrates the charms of our cities as they are and exaggerates the damage that new roads, *provided they are well designed*, will do. The LCC section of the Cromwell Road extension, the new Notting Hill Gate, the new Elephant and Castle and Marble Arch, whatever one may think of them in terms of planning principle, have quite obviously given, or will give, their respective districts a lift visually. Still more could such projects help Wigan and Luton and West Bromwich. Has Mr. Nairn ever taken a long look at our famous boom-city Coventry on his way along one of its congested radials to its needle-in-the-haystack Centre? Has he been in the High at Oxford lately, or had a look round Seven Dials and Covent Garden?

We are convinced that new roads could be, repeat could be, among the prime movers in the renewal of our nightmare districts and the rescue of our best urban spaces.

Yours, etc.,
LIONEL BRETT,
Chairman, SPUR.

Ian Nairn writes—

I think that we are really arguing over words here. What I was objecting to was 'motor-way thinking' being carried into, through and over the centre of towns, when nothing on earth other than the use of the fourth dimension can provide enough room for the statistical increase in the number of vehicles in the next twenty years. SPUR, I think, would agree with this.

What Mr. Brett calls 'new roads' I would call 'removing bottlenecks': certainly Notting Hill Gate, Elephant and Castle, Marble Arch. The Cromwell Road extension is an exception which I freely admit and would willingly see extended into the impermeability of South Kensington (which is not the kind of central area I was meaning). But could it be extended into Belgravia and St. James's?

Finally, very briefly and very, very sadly, some of the worst of our nightmare districts, in terms of the total quality of life lived there, have been created in the name of modern architecture. Until this process stops I will continue to overrate the charm of any humane part of any of our cities—especially Wigan, a lot of which is good fun.

OBITUARY

P. MORTON SHAND

The death of Philip Morton Shand has deprived the modern movement in Britain of one who, though not an architect, was one of its seminal figures. Though fully *engagé* on the modernist side by 1928 or 1929, the manner in which he became involved is not altogether clear, though his first encounter with modernism was, presumably, while preparing an article for the *AA Journal* on the Paris exhibition of 1925. (Much of his life was spent in France and he was a noted writer on French wines, yet—curiously—he is remembered as an apologist for *German* architecture.)

However, by 1929, he was fairly launched on his most influential series of writings, the articles and special features on modern buildings and the more general problems of modern architecture which he wrote for THE ARCHITECTURAL REVIEW. Among these, the most important and most influential in establishing Shand himself, and the REVIEW, in the vanguard of architectural thought in England, were the texts for the special issue (November, 1932) on *Steel and Concrete*, which rallied and galvanized progressive opinion inside and outside the profession, and the series of articles that appeared in 1934-35, under the title *Scenario for a Human Drama*, which may not be the first essays in the history of the Modern Movement, but are the first comprehensive attempt to see the movement as a whole, anticipating *Pioneers of the Modern Movement* by some eighteen months, and *Space, Time and Architecture* by five years. He also translated works by Gropius and Carola Giedion-Welcker, and was one of the first to comment, in English, on the opinions of Adolf Loos (AR, October, 1934).

His last contribution to THE ARCHITECTURAL REVIEW was in September, 1952, when he introduced his own translation of part of Henry van de Velde's memoirs, and in the January, 1959, issue of the *AA Journal* (appropriately enough) Brian Housden attempted a representative sampling and complete survey of the Shand bibliography—an impressive body of work which, in its range and influence, will not be outranked by much that has been written in England on the Modern Movement since he pioneered the field.

He died, at the age of 72, in Lyons, the town where he received the letter from the *AA Journal* inviting him to write about the Paris exhibition of 1925. A memoir of Morton Shand, by John Betjeman, will appear in a forthcoming issue of the AR.

CHARLES HOLDEN

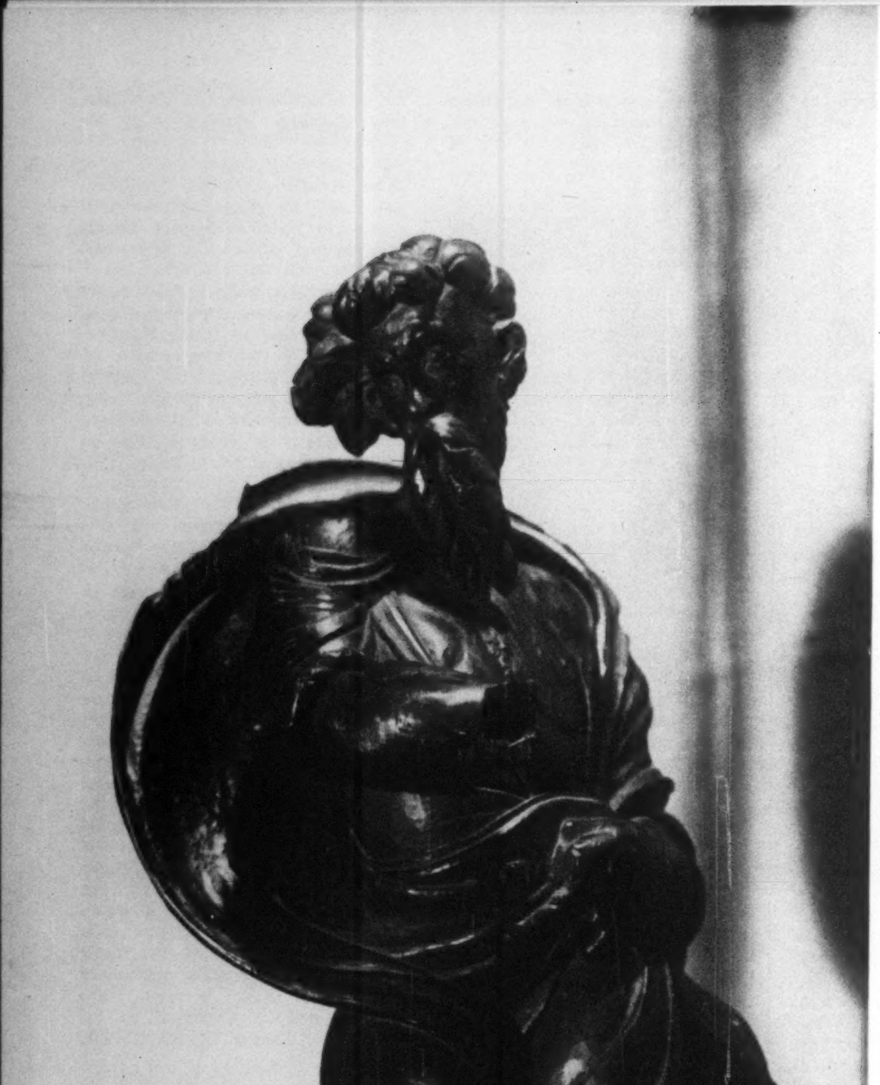
The work that appeared in the Twenties and Thirties over the collective office signature of Adams, Holden and Pearson may yet prove to have been more important to the rise of modern architecture in England than is generally allowed. The scraped, but by no means barren, classicism that they practised, coupled with an adventurous attitude to massing and thus to planning (though always within a broadly pyramidal silhouette) did much to prepare public and patrons for the simplicities of surface and complex novelties of plan that came in with full modernism after 1930. Their main works in this manner were 55 Broadway, for the London Passenger Transport Board, the first swallow (1929) of a long summer of enlightened patronage of modern design in every field, and the University of London building in Bloomsbury, three years later, whose position in the rise of modernism might now seem questionable.

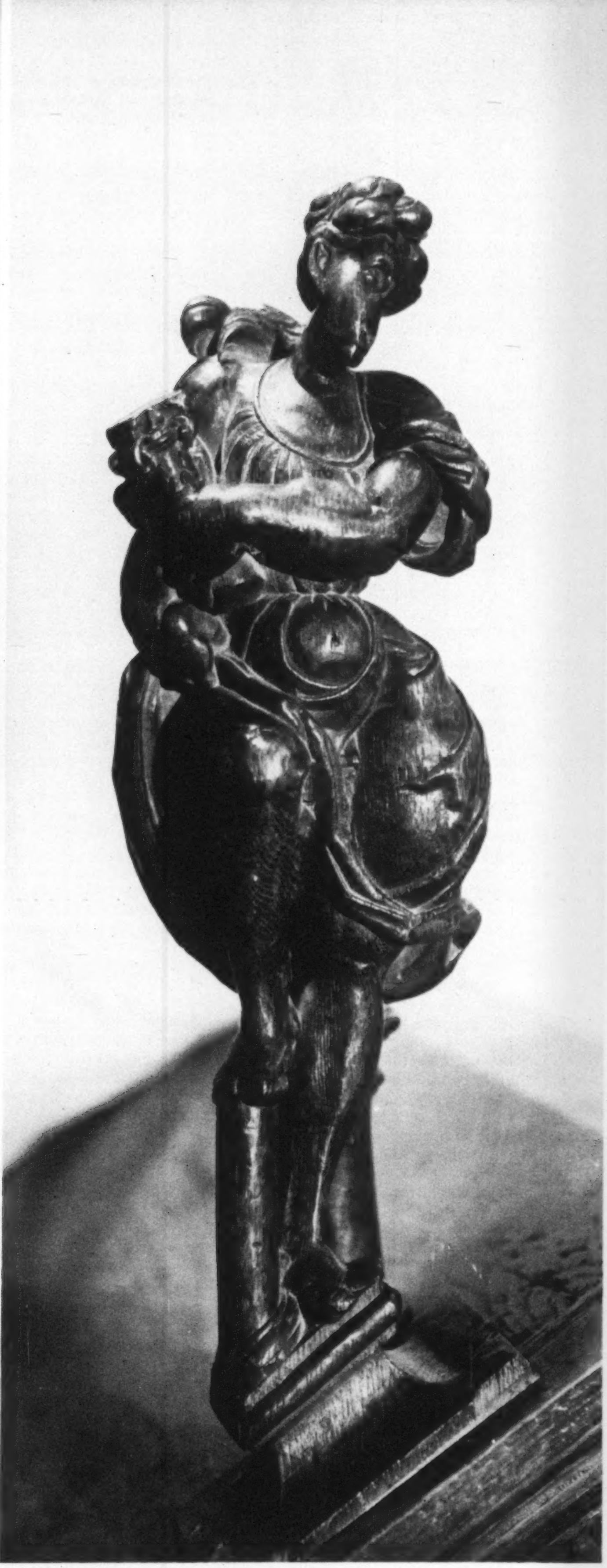
It is no secret that the designing genius within the office was Dr. Charles Holden, and his recent death at the age of 85 has removed from the London scene one who did much to initiate the process of its modernization. That process, as far as he was concerned with it, goes back to the old BMA building in the Strand of 1907, a much disputed work because of the employment of Sir Jacob Epstein for its sculptures (a partnership resumed on 55 Broadway). Coming forward in time it concludes with the English Electric building on the Gaiety site, another controversial design, though for different and this time purely architectural reasons. However, it might be better to leave his career with an incident in which he enjoyed the approval and even the envy of all present—practically his last important public appearance was as one of the 'sponsors' who accompanied Le Corbusier to the rostrum to receive the Royal Gold Medal in 1953.

BRONEK KATZ

The profession will probably remember Bronek Katz, who died in March while barely middle-aged, for his work on the great war-time propaganda exhibitions and for the 'Homes and Gardens' pavilion on the South Bank in 1951, but in the general history of post-war taste in Britain he will be remembered as the initiator of what is loosely termed 'The Shoe-shop Revolution.' That he was one of the instigators cannot be doubted, but it was on the *Richard* chain of garment shops that he first made his mark, winning the competition for their Regent Street store (in partnership with Reginald Vaughan) as long ago as 1948. Later he did work for various shoe-shop chains, most notably, and with the best architectural results, for the Bata company.

Although work like this made good modern design fashionable, and also subjected it to the pulls and tensions of commercial fashion-mongers, Katz was no fashion-monger himself, and it has been said that he practised modern architecture as the normal style of his time. As a result, one notices that the Regent Street *Richard* shop, while it bears the marks of the period when it was designed, has dated far less than the work of many of the merely fashionable followers of Katz's lead, and already begins to carry something of the authority of, say, the surviving shop-fronts of Welles Coates for Cresta, or Mallet-Stevens for London Shoe Company, pioneer works of the Thirties.





The male figure, left, and the woman holding a Corinthian capital, right, come from an almost unknown treasury of Mannerist carvings in an extremely well-known building. Little studied, rarely discussed, never before adequately photographed, these two, and half a dozen others like them, adorn the choir stalls of King's College Chapel, Cambridge. The carving and installation of these figures (seen here about life size) would appear to date from just before, or just after, 1538, their 'rediscovery', for it is no less than that, in spite of the fact that they have always been in public view, dates from the publication of the exhaustive *Inventory* of Cambridge by the Royal Commission on Historical Monuments, which Nikolaus Pevsner reviews on p. 369.

Reyner Banham

THE PERRET ASCENDANCY

In the small firmament of progressive European architecture around 1910, two fixed stars of the first magnitude shine out—Behrens and Perret. The twin sun of classical rationalism, Guadet-Choisy, has just ceased to give light, though hard radiation can be detected; the Viennese constellation is losing its splendour, though Loos still emits an ultra-violent twinkle; the Mackintosh super-nova is about to burn out in a mad flare; Berlage is becoming a diffuse, low-radiance, red giant; the Wright comet is dwindling on the return leg of its orbit, and the perturbations in the movements of the other bodies caused by its passing have not yet become apparent. But Peter Behrens and Auguste Perret burn bright and constant, and bodies of lesser magnitude already reflect the light from Behrens.

Fifteen years later, they reflected only the light from Perret. It was as if Behrens had never existed, and it is still like that—whatever the reputation of the *Turbinenfabrik*, its creator has become an historical shadow. Yet whatever doubts are cast on Perret's ideas and works, the force of his personality can still be felt in the architecture that is being built today. Ultimately, this situation must change, for Behrens, a man of many parts outside architecture as well as in it (painter, typographer, interior decorator, product designer) was a far more accomplished and well-rounded aesthetic personality, by comparison with whom, Perret was a narrow, blinkered monomaniac professional; history must redress the balance between them sooner or later. In the meantime, the bibliography on Perret continues to pile up—not only the routine Gallic effusions, of which Marcel Zahar's[1] is the most recent but not the worst, but also works of originality and substance, of which the most notable to date is Peter Collins's *Concrete, the Vision of a New Architecture*[2], which does practically everything that a book might set out to

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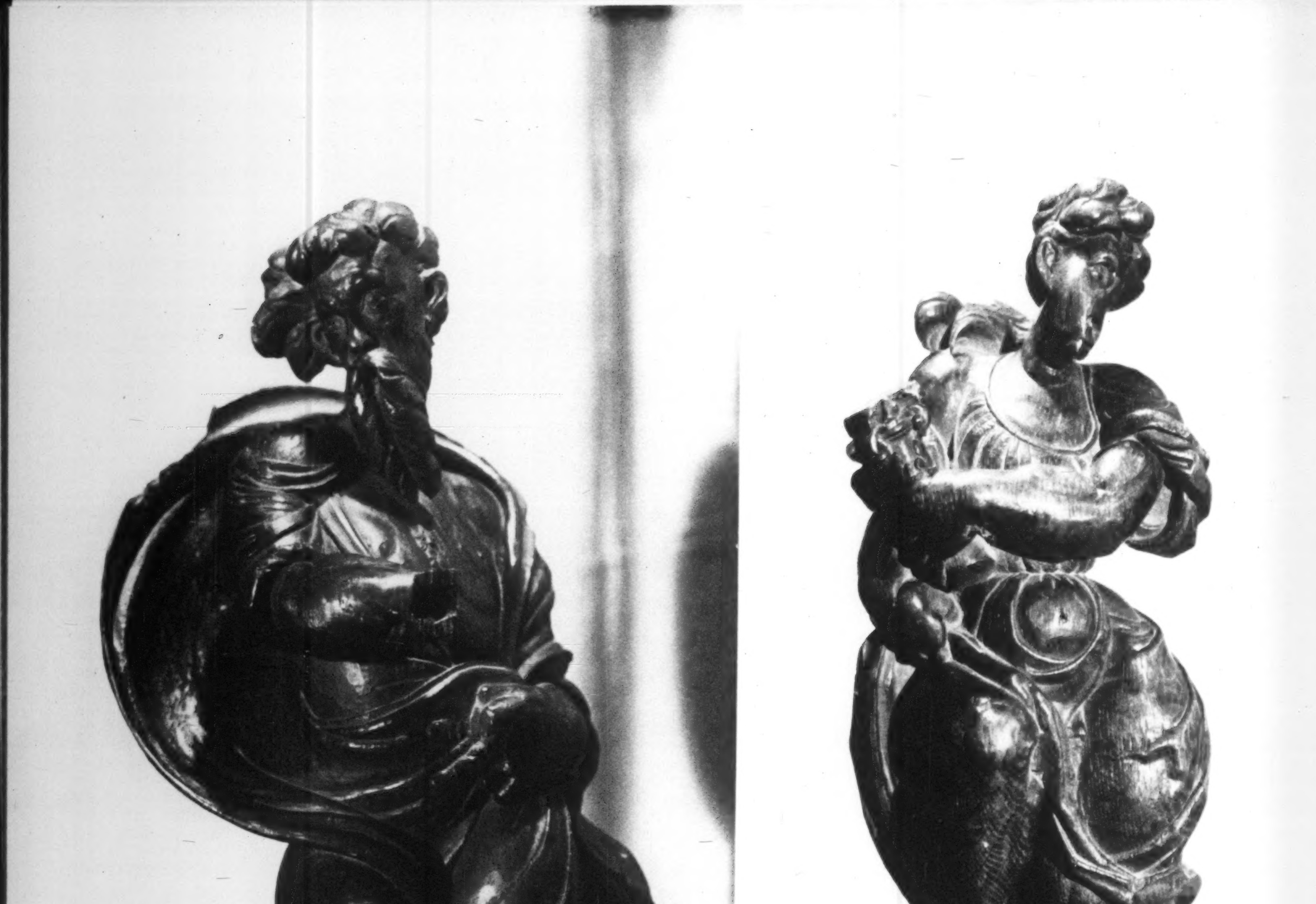
[1] *Auguste Perret*, Editions Vincent, Fréal: Paris.

[2] Faber and Faber. 63s.



The male figure, left, and the woman holding a Corinthian capital, right, come from an almost unknown treasury of Mannerist carvings in an extremely well-known building. Little studied, rarely discussed, never before adequately photographed, these two, and half a dozen others like them, adorn the choir stalls of King's College Chapel, Cambridge. The carving and installation of these figures (seen here about life size) would appear to date from just before, or just after, 1538, their 'rediscovery', for it is no less than that, in spite of the fact that they have always been in public view, dates from the publication of the exhaustive *Inventory* of Cambridge by the Royal Commission on Historical Monuments, which Nikolaus Pevsner reviews on p. 369.

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This unique position was due, one suspects, to a chain of accidents that might easily have led to something utterly banal and unremarkable. He was very nearly a perfect student of the *Ecole des Beaux Arts*, and left with the Prix de Rome almost in his grip. He left, impregnated to the bone with academic ideas but untainted by Academic success, to become a contractor in an anti-artistic material—reinforced concrete. He thus found himself in an anti-Beaux Art situation in spite of his academic leanings ('dilute classicism' Hitchcock calls it), and he thus also found himself in the position of what might be termed an Establishment Rebel. The position was not unique nor an innovation. At the same time, Tony Garnier was experiencing the same syndrome, only in a more acute form because he *had* gained the Prix de Rome, and the whole pattern had been established long before by Henri Labrouste, the inspiration of Julien Guadet who had been Perret's *Professeur* at the Ecole.

The reason why the upshot was not, as with Garnier, a tale of frustrated brilliance, lies (I suspect) in those two words *reinforced concrete*—and this is not the platitude it might appear to be at first sight. No one has yet attempted to explain the compulsive power of reinforced concrete over the minds of a generation, nor why this one material should have embodied so much more than its share of the mystique of modern architecture. But in Perret's France there is one lead that Peter Collins might profitably have pursued in his book, if he had felt any need to explain Perret's influence—which he clearly does not do. Rather, he appears to feel that Perret himself is sufficient explanation.

Those who still feel that some further explanation is needed, may possibly find one in the inadequately assessed influence of Auguste Choisy. Evidence abounds that his *Histoire de l'Architecture* was widely read and known (many of the most telling plates in Le Corbusier's *Vers une Architecture* are lifted from it) and in that case one may assume that its message was known and possibly understood. That message was that the styles of architecture were the logical outcome of technique, and could not be dreamed up simply by taking thought. If there was to be a new architecture, to put alongside all the other compelling novelties of the young twentieth century, it could only come from a new development in technique. It is particularly worth noting that while reinforced concrete had been in existence for some decades when Perret executed his first radical works in the material—the house in the Rue Franklin and the garage in the Rue Ponthieu—his full impact was not made until the early Twenties, by which time Choisy's ideas had been soaking into the mind of architecture for a generation. Thus, when Rob Mallet-Stevens contributed notes on recent work in Paris to THE ARCHITECTURAL REVIEW in 1908, he described Perret's work in concrete, and his work in masonry, and didn't appear to value one much above the other, but after 1918 he is reputed to have told Le Corbusier that he wished they could patent reinforced concrete, and when he contributed to *Wendingen's* special issue on *Frank Lloyd Wright* in 1925, he could speak of nothing but reinforced concrete, which prevented him talking about Wright.

Here then is a circumstance that could complete a chain of circumstances along which coincidence might chain-react, and precipitate a situation in which *Perret* became an alternative spelling for *Beton Armé*. So powerful was the reaction, so complete the fusion of the reputations of the man and the material, that Perret equally became an alternative spelling for *Gewapend Beton*, *Hormigon*, *Cimento Armato*, *Eisenbeton*, reinforced concrete, and everything else including whatever the Japanese term is, since Antonin Raymond early took the Perret Doctrine to Tokyo. All over the world, Perret's vision of concrete as a trabeated material, to be used in straight posts and flat beams, was accepted without question. An Eibink or a Hilbersheimer might protest that concrete was a plastic material and Perret was wilfully imposing an alien aesthetic on it; their cries were lost in the roar of unquestioning approval. An Owen Williams, a Maillart, a youthful Nervi might demonstrate alternative ways of using the material: the profession doffed its collective hat to a *grand constructeur*— and relapsed at once into its former trabeated apathy.

Almost till 1950 this tyranny held, and having held so long, broke disastrously—post-and-lintel concrete construction is Right Out with the bright boys, the Doctrine of Auguste Perret—to use Collins's telling phrase—is simply a provincial vernacular now, and the rest of the profession is in Gadarene pursuit of those parabolic and hyperbolic extremities that Robin Boyd catalogued in *The Engineering of Excitement**. It is difficult to see how the new situation is better than the old one, except that anarchy is a more manipulative situation than tyranny, and encourages open-mindedness, which an exclusive system like Perret's could not afford to do.

Now that it is all over, one can see what a gigantic achievement it was—if the phrase Form-giver of the Twentieth-Century applies to anybody, it applies to Perret, for even those who did not accept his detail treatments and surfaces still accepted his basic propositions on structure; those who did not share his academic preferences for symmetry and tall windows still accepted his propositions on frame-and-fill. *Concrete, the Vision of a New Architecture* is exactly the tribute this achievement deserved; it is written so securely from inside the Perret tradition that what might at first appear a disingenuous title (it remains a misleading one) *Concrete, the Vision of a New Architecture* instead of, say, *Perret, the Imposition of an Old Aesthetic*, cannot decently be called disingenuous at all, it is inevitable given the premisses.

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*AR, November 1958.

Equally inevitable is the sudden disintegration of the fourth chapter of Collins's exemplary preliminary narrative of the prehistory of concrete. The tale, having developed, in Choisy's phrase, according to the logic of technical procedures, goes adrift as soon as it appears that concrete could, by that logic, have gone off in a different direction to Perret's. The point of crisis is Breslau in 1913; the building, Max Berg's *Jahrhunderthalle*, that stupefying apotheosis of reinforced concrete as the material of structural drama on a Wagnerian scale. Berg's achievement is given its full value in phrases that are a tribute to Peter Collins's intellectual honesty when actually confronted with a building—Here . . . 'men perceived for the first time a really new architecture, novel in form, vast in scale, with a delicacy of line and plasticity of surface, evolved . . . from the ineluctable demands of geometric and scientific laws.' Nothing could be more right than this analysis; this was the point, near enough, to which Torroja and Candela had to return in the late Forties to find out how concrete really worked, and this was the triumph of concrete architecture to date. But at that date Perret was involved with the prissily neo-Classicist *Théatre des Champs Elysées*, and Collins is committed in the last resort to Perret not to concrete, and the chapter ends in a shambles of changed viewpoints, hedged bets and *partis pris*.

But, up till that point of final confusion, this is exemplary historical writing, readable, compact, shrewd, and full of new material. We have to thank Peter Collins for having produced a first *complete* prehistory of reinforced concrete that looks as if it will be very difficult to supersede. This is the first to go back to *pisé*, and other primitive conglomerates (not to the Romans) and show that from them the line of descent to concrete as we know it is continuous; the first that is not blinkered by Francophile adulation of Monnier and Hennébique, and therefore able to give these two their due place alongside German, British and American pioneers of the material. Indeed, his register of pioneer buildings and publications is so exhaustive as to make the finding of any others very unlikely—it will require techniques and resources more like those of Interpol than of architectural historiography. Already I have had my attention drawn to an 'unknown' early concrete house in the US—which I went straight off and found in Collins.

Indeed, provided one always makes allowances for the Perret slant, one can speak almost as highly for the rest of the book, such as the two middle chapters on 'The search for a new architecture,' and the same is abundantly true without reservations at all, in the final five chapters on Perret himself. These chapters are not simply an expanded version of Peter Collins's essay on Perret that appeared in the AR for August 1953, they are Perret re-seen in the light of extensive readings in the Classical and Rationalist traditions that shaped his thinking, readings in small things and detailed architectural usages concerned with pilasters and windows, for instance, as well as readings in grand general concepts and high-level architectural philosophy, such as were seen in his Darwin centenary essay in the AR for December 1959.

No one, arguing from the viewpoint of genuinely progressive and evolving architecture (a concept on which Collins could doubtless do an eloquent semantic hatchet-job without, I submit, destroying its validity) could conceivably accept his estimate of Perret, even in the elegiac and modified form in which it appears in the closing paragraphs of the book, paragraphs that all but admit the inner contradictions and ultimate futility of Perret's position. But no one who appreciates good scholarship, good writing and cogent argument could fail to take pleasure in all but a few pages of the book, nor could they fail to enjoy the process of disagreeing with the author. For my part, this is a wrong-headed book that I find I can unreservedly recommend to students, knowing that the points of disorder and angles of slant will immediately become apparent in the general air of intellectual clarity that pervades the whole, and I wish there were a book on Behrens of which I could say the same.

TRAINING COLLEGE, LIDINGÖ, STOCKHOLM

ARCHITECT | **ANDERS TENGBOM**

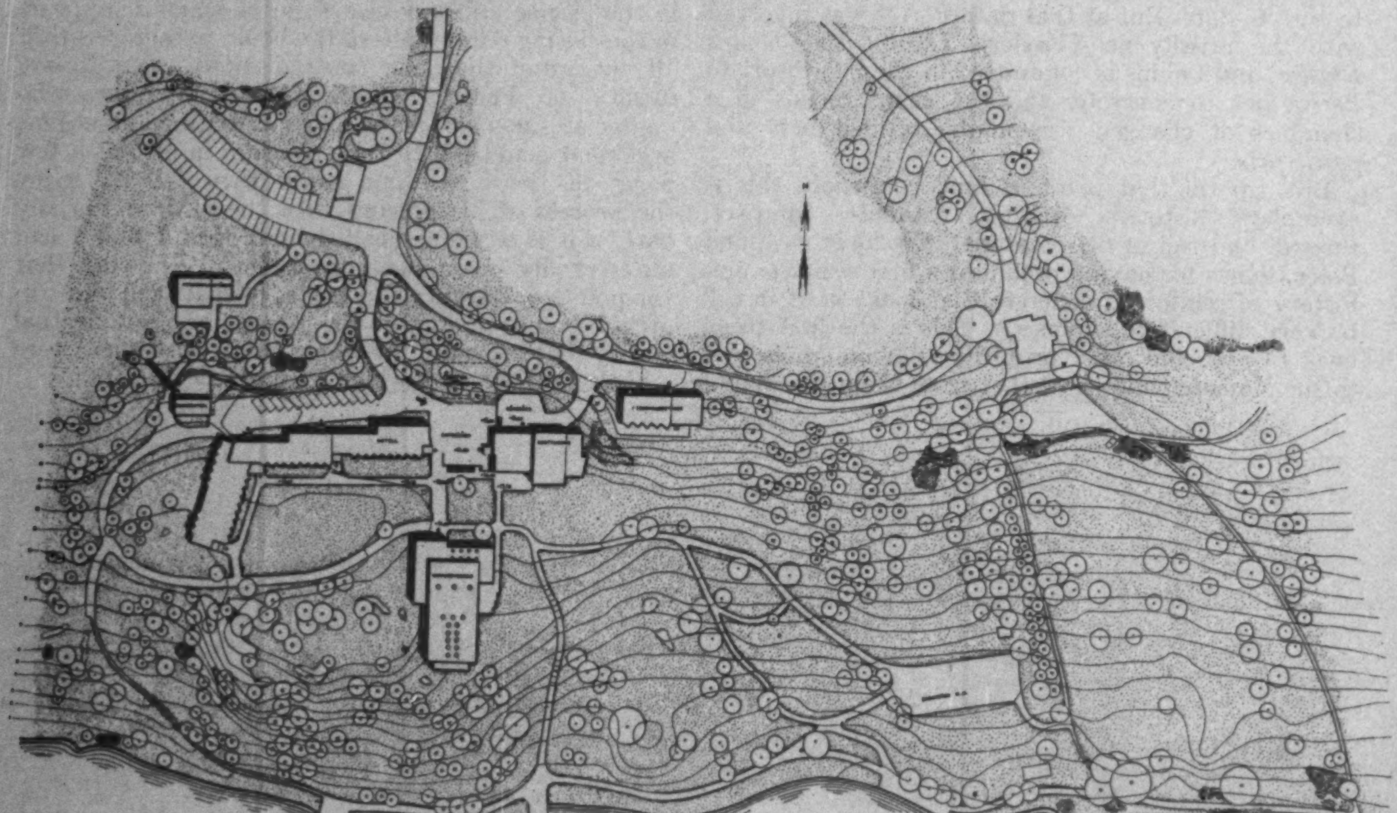
Anders Tengbom is the heir to a great name in Swedish architecture, but also to an impressive tradition of modern design that his father, Ivar Tengbom, helped to create. Yet, if one compares the pictures of his new Lidingö training college with those of the buildings illustrated in *Sweden Builds*, which—exactly ten years ago now—fixed the image of Swedish Modern in the eyes of English-speaking architects, there appears to have been more revolution than evolution in the intervening decade.

Although the theme of the building is still characteristically Swedish—an employees' training centre—and exhibits the same kind of social orientation that underlay the earlier work, the architecture no longer has the quality, so marked before, of schematic prototypes for other socially-progressive nations to copy. The internationalism of Sweden's modern architecture, even at its most cosily domestic, was always a matter of note, and its influence has visibly gone round the world, to become the inspiration or ideal aim of town-planners, school designers and domestic architects working on every scale from that of individual dwellings to large-scale settlements.

With Lidingö, however, there seems to have been a turning inwards towards a more specifically Scandinavian standard—to be more specific still, a *Baltic* standard. But the immediate resemblances to recent Finnish work, while striking enough to the eye, should not be over-played because they are no more than superficial. The tendency towards greater mass in the buildings themselves, and a more severe and direct relationship to the surrounding landscape (instead of using rocks and small trees as picturesque foils to the building forms) seems to be a general trend of Scandinavian architecture at present, and can be found in association with an entirely different set of building-forms in, for instance, Sverre Fehn's and Geir Grung's museum at Maihaugen (AR Marginalia, February 1960) as well as other recent Norwegian work.

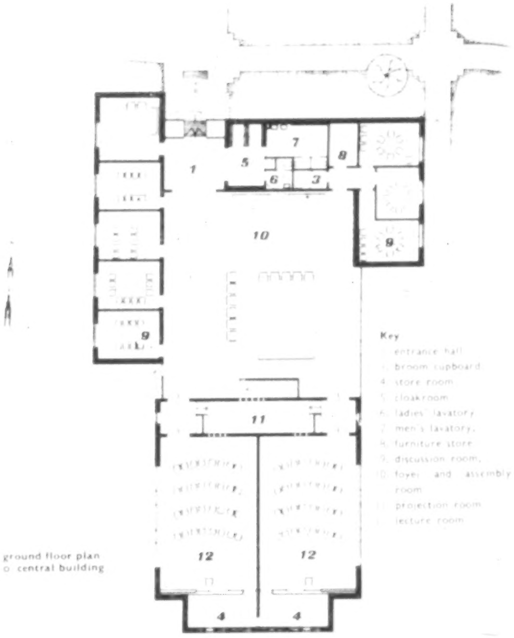
But it is worth noting that Swedish opinion, as represented by the observations of Erik Thelaus (*Architektur*, 7, 1959), feels that it can justly compare the grouping and interrelationship of the buildings at Lidingö to an 'engelskt college.' To some extent this comparison with English collegiate planning depends on an inessential resemblance that probably strikes Continental eyes more forcibly than it would English—the use of grass and lawns. But the comparison is worth taking nearer to the bones of the scheme because the plan, below, bears no resemblance to even the most 'liberated' of recent collegiate schemes—although the actual buildings might be compared to David Robert's Clare Hostel (AR, June 1959).

Nevertheless, the photographs show some things that a plan cannot even suggest—the feeling of enclosed space that exists between the three main blocks, the psychological effect of enclosure produced by the turn of the end of the residential block, the use of incidents like steps and seats to keep ground-space within bounds, even where the view over the water is effectively infinite, but—above all—the use of the fall of ground and the bank of conifers to give a sense of enclosure that is not collegiate to look at, yet refers back, with numerous inversions and permutations to the ultimate source of the collegiate dream—the Grove of Academe.



site plan

Sponsored by the Association of Swedish Employers, this is a new type of residential industrial college designed to provide training courses of various kinds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Key
1. entrance hall
3. broom cupboard
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ground floor plan
o central building

for foremen and others. The site is a pine-clad slope bounded on one side by Hustega Bay, with a long view down the waterway leading to Stockholm.

There are three main buildings, each of two storeys, approached by a common entrance courtyard: a hostel for the students containing 70 single rooms, a restaurant block with the restaurant itself and the kitchens on the upper floor and the reception, library and common-rooms on the lower, and a central block containing the teaching accommodation, mostly in the form of small lecture-rooms. This building has a large central foyer designed for use also as an assembly-hall. In addition to the three main buildings there is a smaller three-storey hostel block with its own common-room, and a separate boiler-house.

The hostel bedrooms are identical in shape, each with its lavatory opening off the entrance lobby and with

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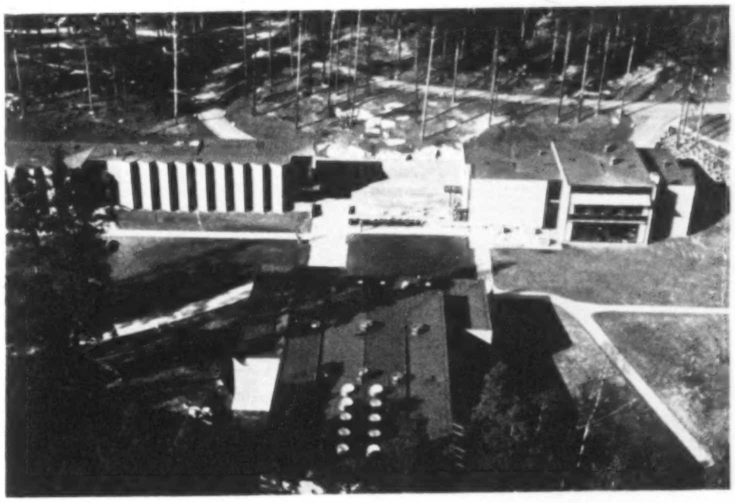
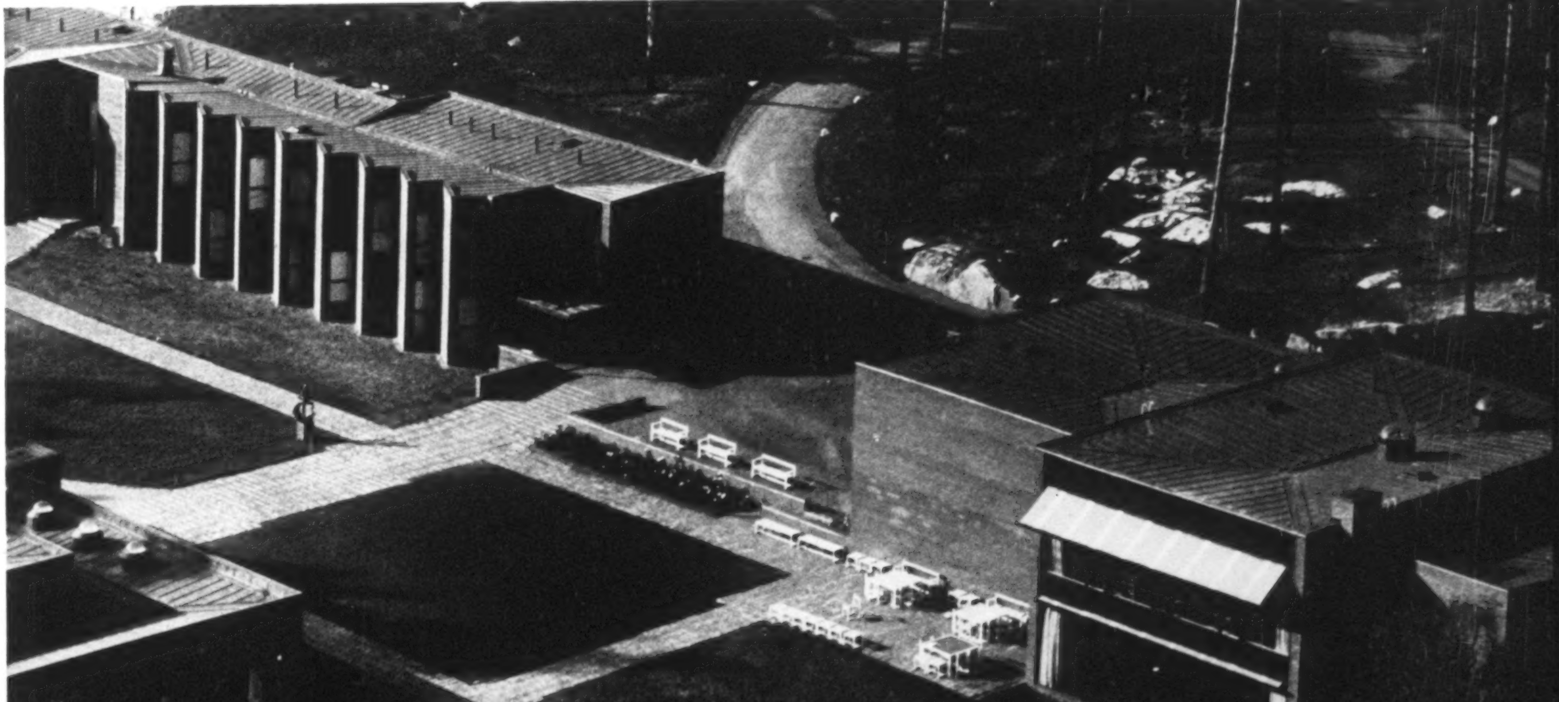


1, looking north (away from the waterfront) over the central teaching building, with the main hostel block on the left and the restaurant block on the right. 2 (below), the square where the three buildings meet: corner of teaching block on the left; hostel block top left; restaurant (with striped sunblinds) right.

2



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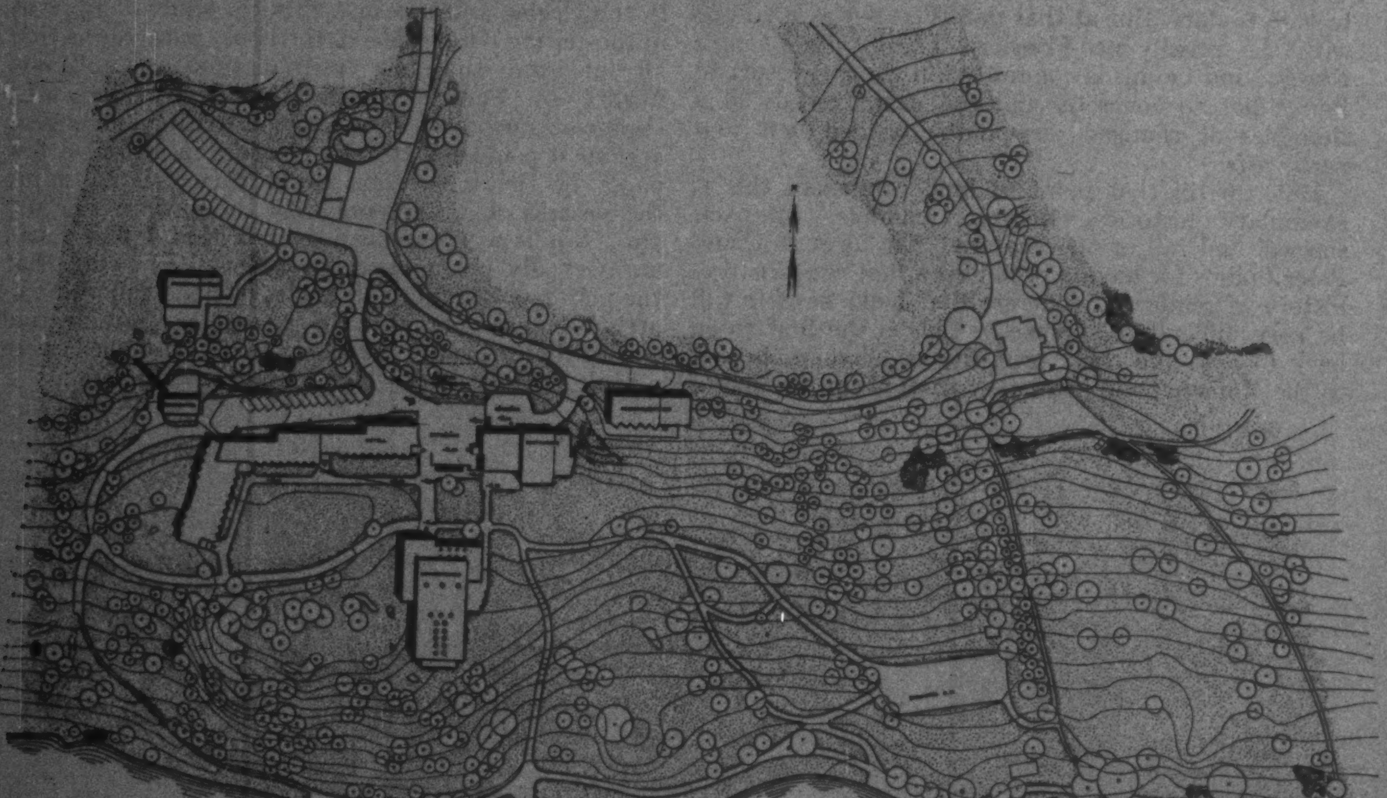

site plan

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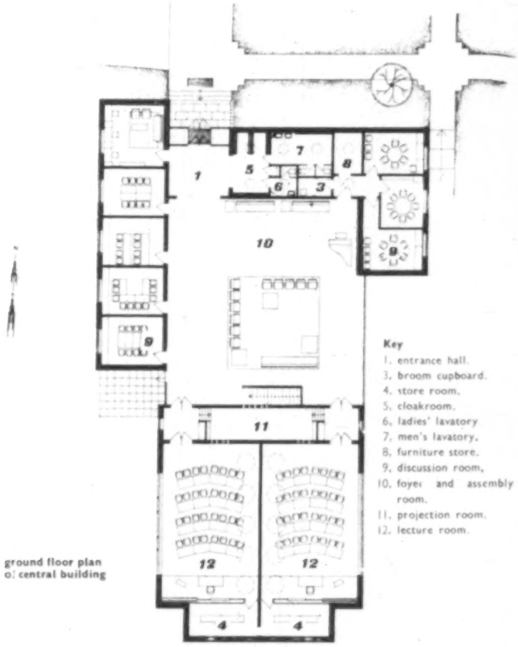

Key
1. entrance hall.
3. broom cupboard.
4. store room.
5. cloakroom.
6. ladies' lavatory
7. men's lavatory.
8. furniture store.
9. discussion room.
10. foyer and assembly room.
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ground floor plan of central building

for foremen and others. The site is a pine-clad slope bounded on one side by Hustega Bay, with a long view down the waterway leading to Stockholm.

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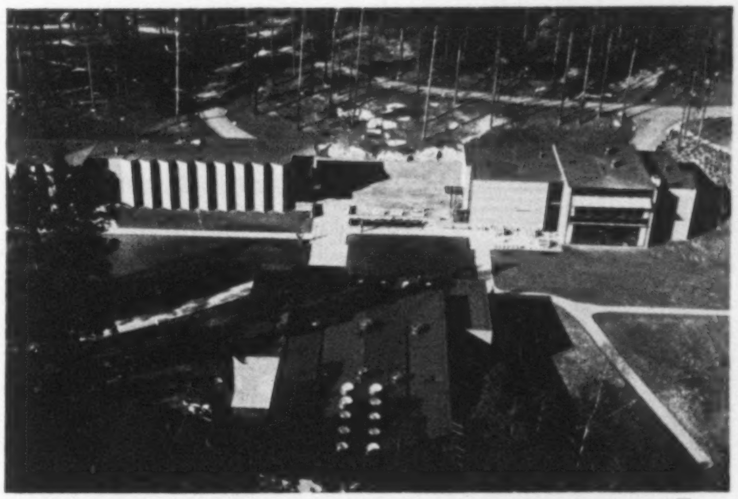

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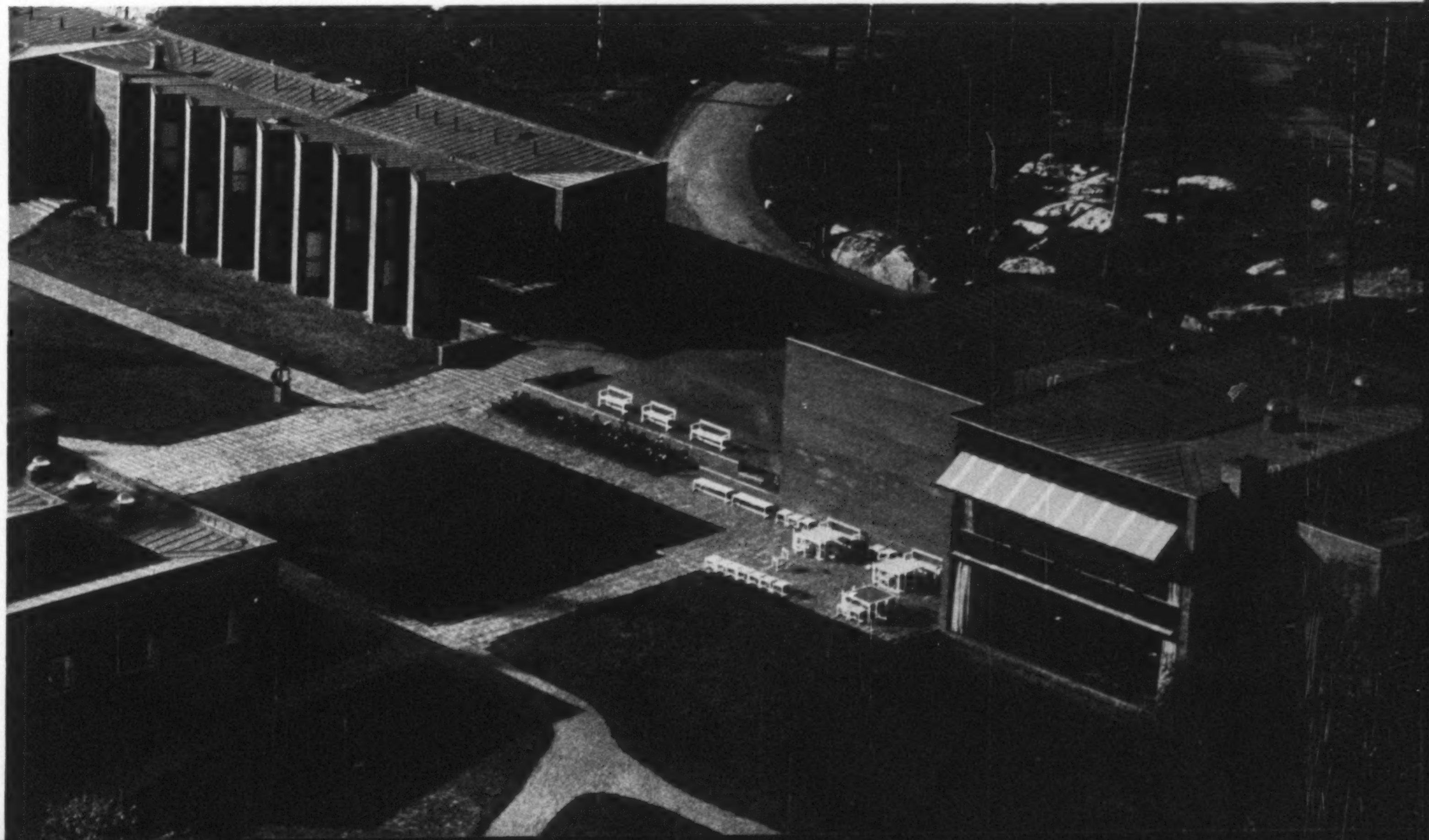
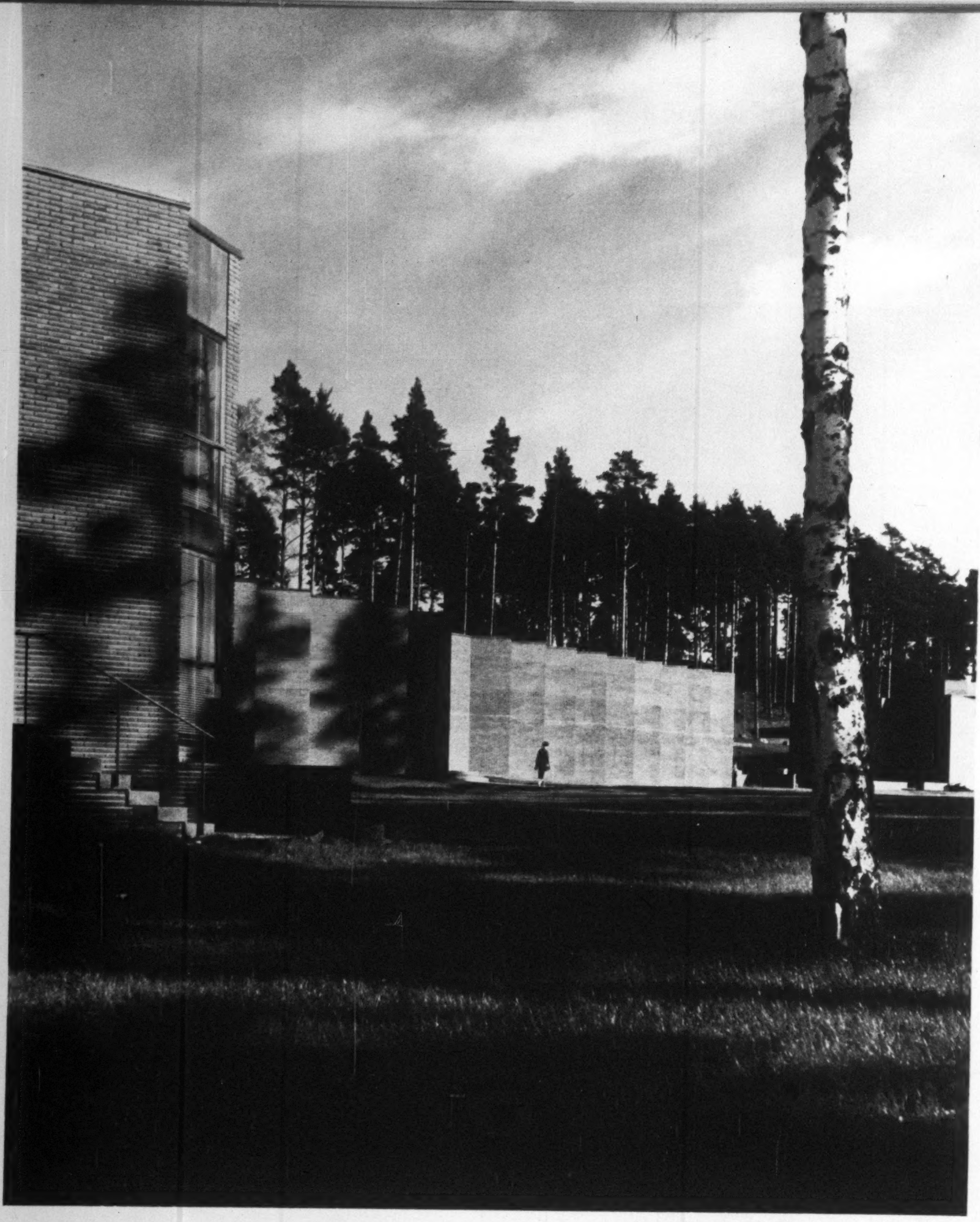




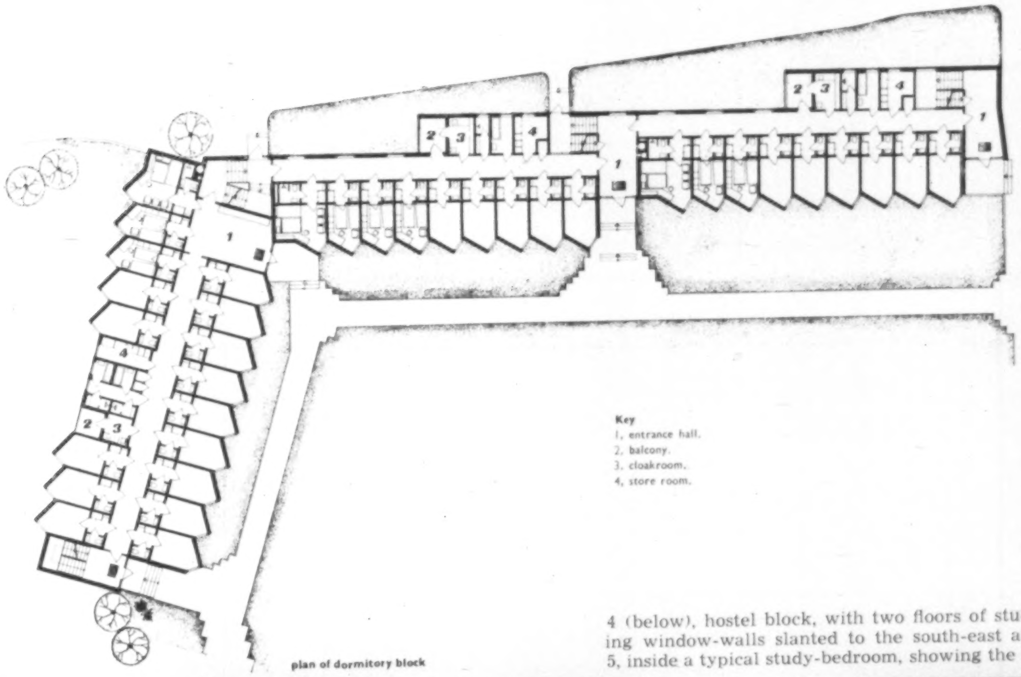
3

3, view from the south-west of the main hostel block, where 70 pupils live in single study-bedrooms.

a diagonally placed window, giving privacy and making the most of the view. This window arrangement gives the building its characteristic saw-tooth outline.

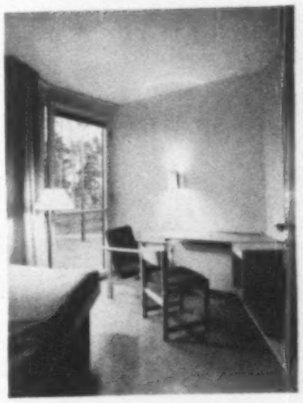
Construction is load-bearing brick, on concrete foundation walls beginning at ground level. The brick is a hard-burnt variety, red in colour. The trim—for purposes such as window-sills—is copper and external woodwork is teak. The contrast, especially in the restaurant block, between window-filled walls and plain areas of brickwork without openings has been achieved to some extent by the use of top-lighting in less important rooms.

The interior designs and furnishing are by Sven Kai-Larsen, working in collaboration with the architect.

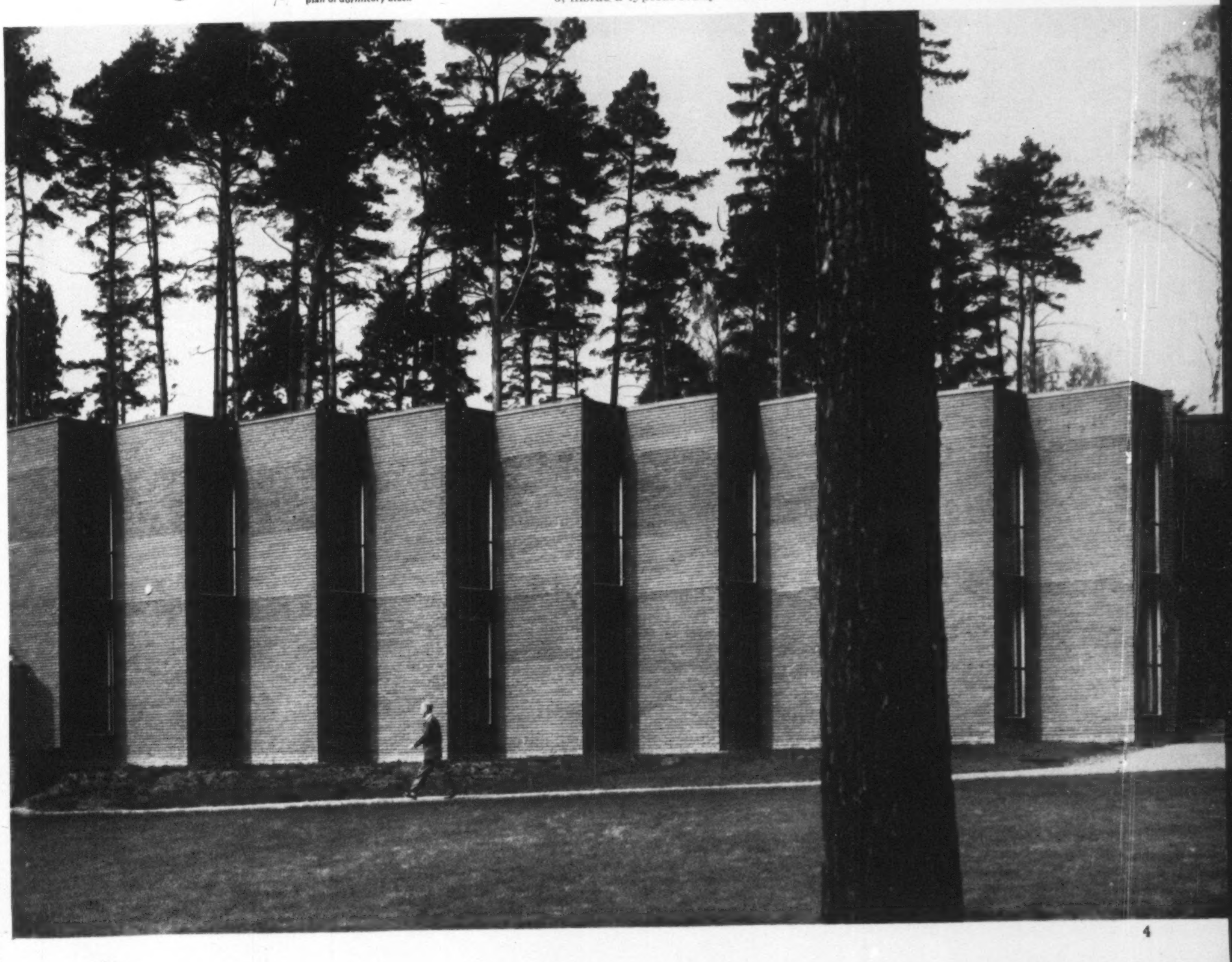


Key
1, entrance hall.
2, balcony.
3, cloakroom.
4, store room.

plan of dormitory block


5

4 (below), hostel block, with two floors of study-bedrooms, from the south, showing window-walls slanted to the south-east and the view.
5, inside a typical study-bedroom, showing the built-in furniture.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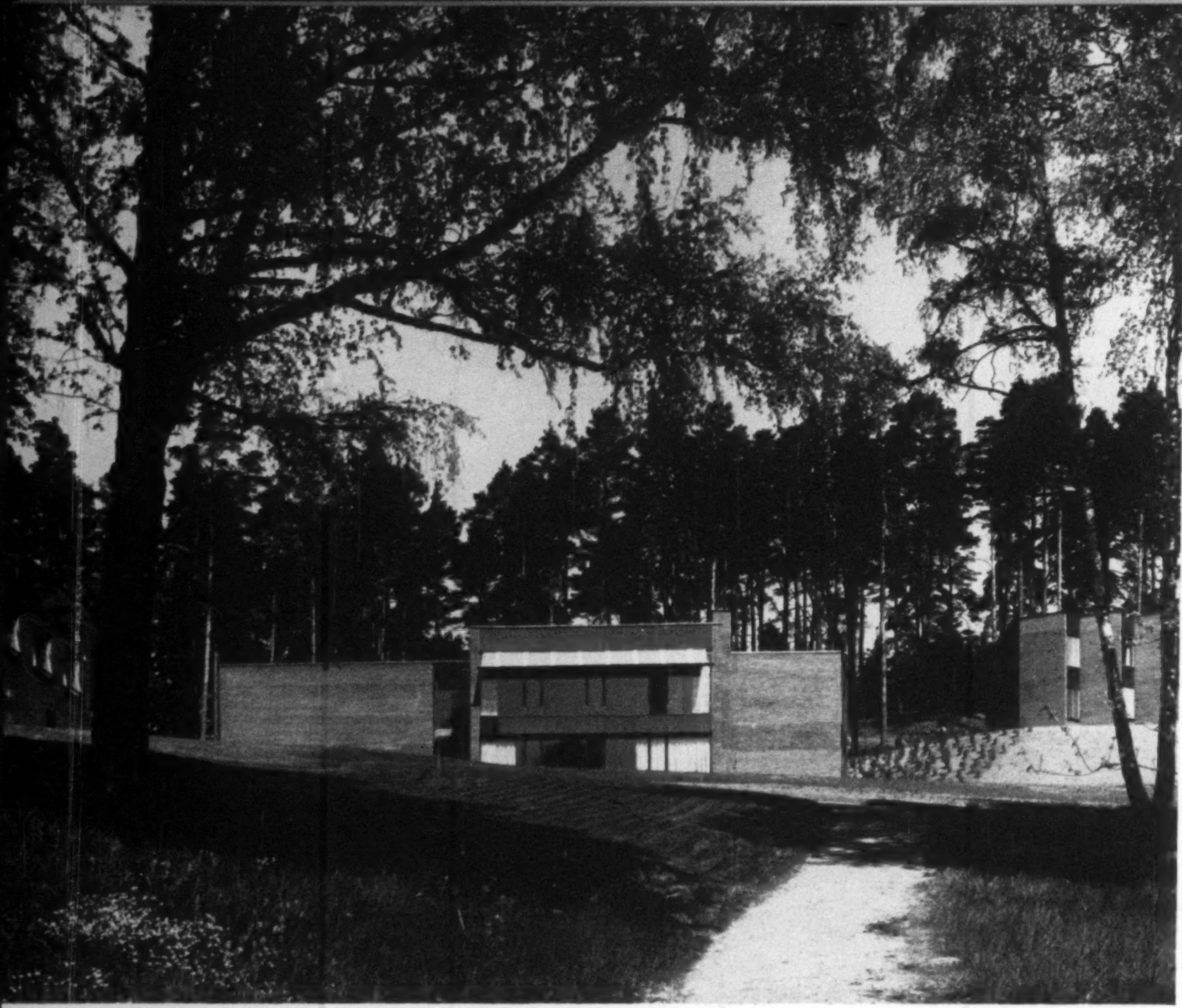

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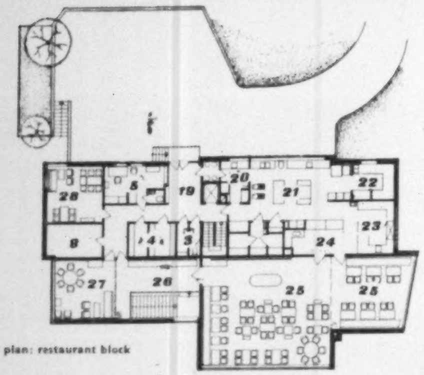
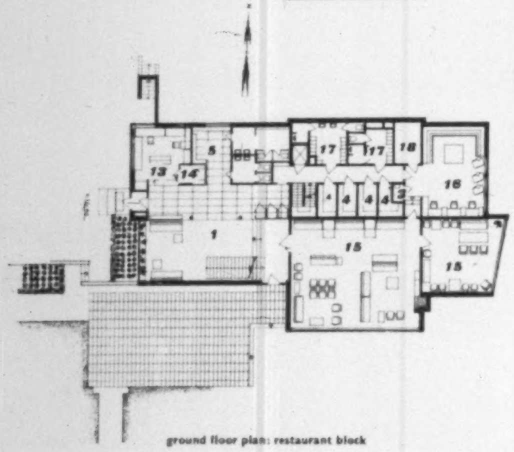


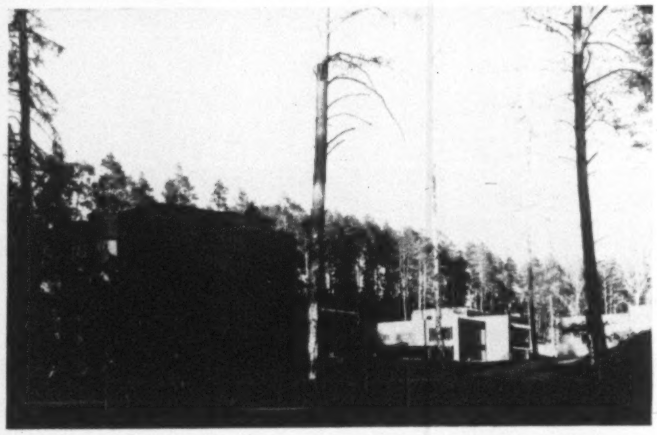
first floor plan: restaurant block



ground floor plan: restaurant block

photographs by Lennart Olson

6, the restaurant block from the south. On the right can be seen one end of the smaller of the two hostel-blocks (see site plan, page 376), designed on the same basis as the larger.
7, the whole group of buildings, in its pine-tree setting, from the south-west. This photograph only by G. E. Kidder Smith.



7

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10, foyer and assembly room.
11, projection room.
12, lecture rooms.
13, reception.
14, shop.
15, sitting rooms.
16, library.
17, staff changing rooms.
18, office.
19, lobby.
20, food preparation.
21, kitchen.
22, cold buffet.
23, washing-up.
24, servery.
25, dining room.
26, hall.
27, club room.

*'As a practising architect I have enjoyed, been infuriated by and—I hope—profited from the **1960** series. It is obviously good for us to be constantly reminded that, as a profession, we are vain, ill-informed and mentally lazy, and over-dependent on superficial or rule of thumb judgments. Since we are so often asked for our opinion upon everything from child-psychology to potted plants, we begin to think our views upon any subject are of value.'*

Hugh Casson

1960

PROPOSITIONS

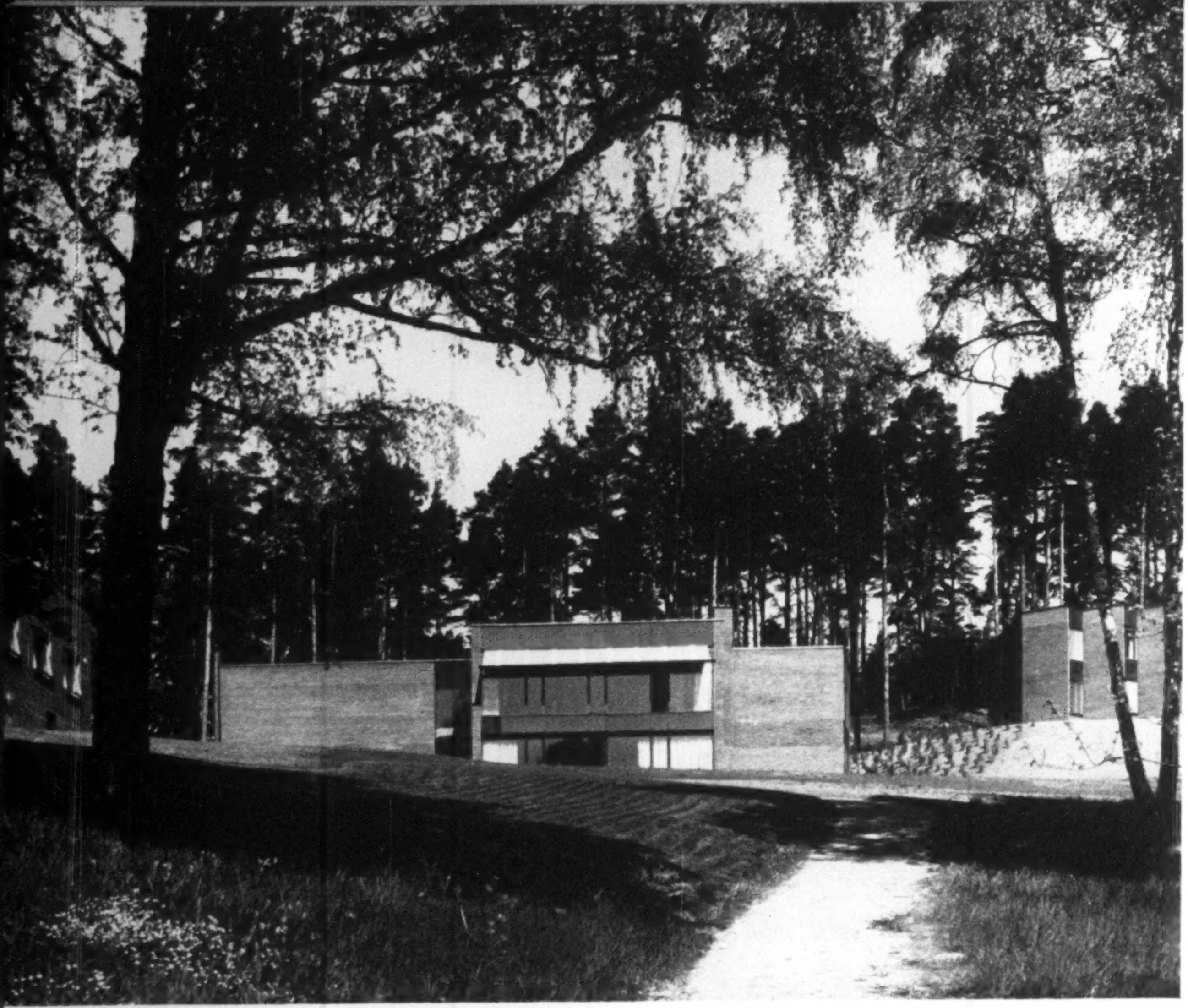
5

the editors: J. M. RICHARDS, NIKOLAUS PEVSNER HUGH CASSON & H. de C. HASTINGS

review the trend of the series

The object of the ***1960*** series (which has been appearing monthly under Reyner Banham's editorship in the AR since February) was to open a field of discussion, and to maintain discourse within that field at the particular level that enables a magazine to contribute fruitfully. Not at the most abstract level of general ideas—more suited to the learned book or university lecture—nor at the purely practical level—more suited to conversation across the drawing board or clerk-of-works' table—but at that ***median level of informed but sociable conversation*** which often seems to reveal workable truths in the most profitable manner. Indeed, the symposium that formed the basis of 1960/3 was an attempt to translate such conversation into print, but all the contributions to the series, with their accompanying glosses and commentaries, may be regarded as attempts to maintain this general level of discussion-with-information.

The series, but not the discussion, now closes with the comments of the members of the editorial board of THE ARCHITECTURAL REVIEW, speaking not *ex cathedra* as editors making a public statement of policy, but *propria voce*, as ***private individuals expressing personal opinions.*** Indeed, what follows might be taken as the publication of the sort of discussion-with-information that goes on within the editorial system of the AR, before a policy decision is taken. But the discussion should not be taken as typical, for two reasons.



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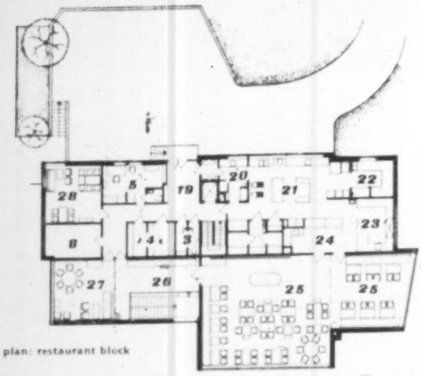
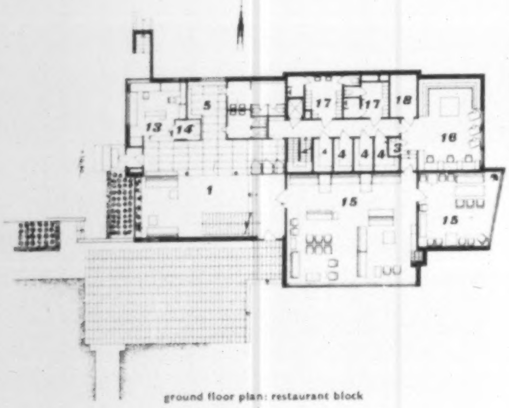


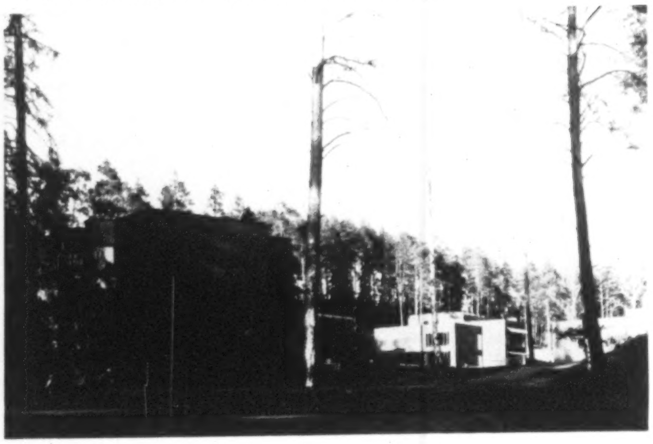
first floor plan: restaurant block



ground floor plan: restaurant block

photographs by Lennart Olson

6, the restaurant block from the south. On the right can be seen one end of the smaller of the two hostel-blocks (see site plan, page 376), designed on the same basis as the larger.
7, the whole group of buildings, in its pine-tree setting, from the south-west. This photograph only by G. E. Kidder Smith.



7

key

1, entrance hall.
2, balcony.
3, broom cupboard.
4, store room.
5, cloakroom.
6, ladies' lavatory.
7, men's lavatory.
8, furniture store.
9, discussion room.
10, foyer and assembly room.
11, projection room.
12, lecture rooms.
13, reception.
14, shop.
15, sitting rooms.
16, library.
17, staff changing rooms.
18, office.
19, lobby.
20, food preparation.
21, kitchen.
22, cold buffet.
23, washing-up.
24, servery.
25, dining room.
26, hall.
27, club room.

'As a practising architect I have enjoyed, been infuriated by and—I hope—profited from the ***1960*** *series. It is obviously good for us to be constantly reminded that, as a profession, we are vain, ill-informed and mentally lazy, and over-dependent on superficial or rule of thumb judgments. Since we are so often asked for our opinion upon everything from child-psychology to potted plants, we begin to think our views upon any subject are of value.'*

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Firstly, the situation is unique; the ***1960*** series has been a more or less ***independent exercise*** within the framework and page format of the AR, and prime responsibility for the opinions expressed, the manner of expressing them and the manner of presenting those expressions, lies with the series editor, Reyner Banham. The views of the editors are thus—almost—to be regarded as if they had been reading some other magazine, not commenting on contributions they had commissioned and approved themselves.

Secondly, the views they express have been conditioned to a lesser or greater extent by a series of ***propositions and questions*** put to them by the series editor. This document is printed at the right.

Some of the editors answered these propositions and questions 'as found,' some did not. Although each set of replies is a document in its own right, with its own specific value, it has been found simpler—albeit with regret—to break up three of them for purposes of commentary and reply, and to group the comments by ***subject matter,*** rather than by authorship.

To begin with the most general comments on the series as a whole, Casson made a prefatory observation that may reflect either the spirit of the times, or the spirit of the series editor—

> 'Surprising, and depressing, to me is the general impression of the series that while everybody contributing is *interested* in architecture, nobody seems to enjoy it, or even *like* it. It's treated, like a recalcitrant motor-bike, with a mixture of exasperation and curiosity (the product of despair?). It is crouched over and taken to bits; components are examined, shaken, blown through, and re-fixed—but in the end nobody goes for a spin.'

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Casson and Pevsner, also commented in some detail on individual articles and contributions. Thus, on the ***Science Side,*** 1960/2, they offered very similar opinions, in general, on all three contributions—

Casson

Surely Mr. Brothers makes exaggerated claims? Every product programme starts with a performance brief, and nobody takes an unsuitable component off the shelf if there is time and money to develop something better in parallel. There is no 'glamour,' reflected or real, in off-the-peg elements except when the performance specification in the budget and timing demands, as it usually does, their use.

The missile-merchants appear to have been given unlimited time and money (estimated cost of 'Sea-Slug' £2 million, actual official cost to date £40 million) and were, therefore, rightly able to start from scratch. (I suspect, for all this, their products are by now bulging with unexpected excrescences not in the original brief.) Is it implied that given similar opportunities architects would be so hypnotized by the 'mystique of standardization' that they would be unable to discard it?

Mr. Drummond is the modest and therefore trustworthy technician. Here, he says, are the facts. It's not for me to say how they should be interpreted or used. Yet even he and his machines depend completely upon an exact definition of the problem. Charles Eames, as I remember, remarked that if you can do this you have already solved four-fifths of the problem, and you might do worse than settle for that.

Llewelyn-Davies's is lucid and thoughtful stuff—acceptable with the proviso that an architectural *intention* comes first. Some of it is distressingly obvious. Why should I have to read Messrs. Ittelson and Kirkpatrick in order to be told that 'all human beings inject an element of stored visual experience into what they see?' How could it be otherwise? Sir Winston Churchill did not have to study group dynamics in order to argue that the new House of Commons should be too small to seat all the members. He acted upon intuition and the evidence of his own eyes.

Pevsner

The three sample contributions differ in value and character. The first describes no more than what happens all the time in product design. The plea to develop equipment and envelope concurrently is the same, e.g. in wireless and wireless cabinets. Number two is purely practical, i.e. on quite a different plane. It says no more than: here is a tool which technicians can use for you, if you can brief them. Number three is essential. Llewelyn-Davies's case that the architect ought to know the results of sociologists' and perception boys' researches is conclusive, provided again that the architect briefs the scientists. This proviso ought to be made. Sociologists' and consumer preferentionists' investigations have none of the scientists' precision. They can easily be biased and sampling as well as interpretation

Banham

1. It is basic to the whole argument of the series that technology will impinge increasingly on architecture in the next ten years, and that technological habits of thought are hostile to architectural habits of thought.

2. From this emerges the related issue of the position of the architect in the design team—where it is repeatedly proposed that the head of the design team cannot be responsible for the visual appearance of the building and vice versa.

Query: Is this prospect pleasing?

3. Llewelyn-Davies proposed in the second article and Page and Cox pursued the matter further in the third, that the aesthetics of building can be put on a fully scientific basis.

Query: (*a*) Is this likely or desirable? (*b*) Could it be a way round the query in 2?

4. It will also be observed that Llewelyn-Davies speaks of 'calling in' architectural historians to advise on certain design problems. This is an example of increasing sophistication in the use of History and is parallel to the increasing sophistication in aesthetics suggested by Llewelyn-Davies above.

Query: Is this sophistication and increasing self-consciousness to be welcomed?

5. Page speaks in a footnote of 'rational aspects of town planning as opposed to Civic Design.'

Query: This appears to be an extreme case of the split between technology and tradition. Do you see any hope of closing this gap in the foregoing propositions, or is it a problem that can only be solved from outside?

Banham

1. Weapons system—no, the claims are not exaggerated. The only way to get a big missile from A to B is to design a complete system, including the men to operate it and the industries to supply it with fuel. As far as the armaments business is concerned it is new, as the armaments business clearly realizes.

2. Human Sciences. A key paper, and I am proud to have had some hand in getting it published. Obvious in some of its propositions? Of course, science is only commonsense with four-wheel drive. But—and this is an important *but*—no theory of aesthetics (except possibly Picturesque) that could be taught in schools, takes any cog-

of samples are open to misuse. So the architect ought to be in on the investigation from the outset and ought not to believe that he can get ready-made material to use.

and again on the ***symposium,*** 1960/3, they are in general accord, and raise a number of points that require comment from the series editor.

Pevsner

The symposium is diffuse and weak, with much too much 'sort of' stuff. But it poses the central problem, and this would have deserved the full Reyner Banham treatment. The great curiosity of the series is that the authentic claims of the architect, i.e. the architectural side of architecture, come in through a back door at a nowhere stressed moment. (Page: I mean it's already been said that architects are interested in beautiful buildings) and is never taken up with vigour.

This more than anything proves the cleavage between left and right columns in 1960/1 and the total loss of self-confidence among architects. The non-architects say: For a building to function, i.e. to be satisfactory, you need specialists under an able leader. Similarly the technological column of 1960/1 states that inoculation may be a function of architecture.

No architect really stood up to say that he is concerned with visual values (i.e. aesthetics) and that, if a building fails visually, we are not interested in it.

You can have 'non-architecture' that way before you know where you are.

The comparison with films was illuminating, because what I'd call the best films were still Dreyer and Flaherty and de Sica. The comparison with motor cars is equally illuminating the reverse way. For what I'd call good cars are rare, but I may be ready to call a good car a well-functioning car, i.e. to sacrifice aesthetics to performance. That is what the Pages and Alloways are doing. The car designer just like the architect is only one in a team whose policy is dictated by consumer-research or its equivalent.

Casson

I am personally unsympathetic to this form and find this example, though mercifully free from the usual 'peacocking,' less valuable than it would have been if directly presented by R.B. I have covered most of my points under other heads, principally that nobody seems to be talking about architecture as I understand and love it, but am puzzled by the implication that the architect acts on 'conditioned reflexes of habit' more often than upon 'conscious action based on knowledge.' (This seems impossible to prove and in any case there are certain things that can *only* be learned through the emotions and to which reason and knowledge will be of little help)—and amused by the deathly silence that greeted the word 'church.' While it is true that creative work in industry is a matter of anonymous teamwork, it is also true to say that the best aircraft—shall we say?—are stamped with the personality of an individual designer—George Edwards, Barnes Wallis, or de Havilland.

Casson also raised another point, about information that he had hoped to glean from the series, but which might possibly be regarded as outside his brief by the series editor—

I am disappointed not to have learned more about the reasons (psychiatric? straight reaction?) for the current passion for 'as found' materials, the restriction to brick, concrete and wood—(as if no other materials existed), the search for mass and weight, the horror of elegance. Why do some shapes, for years unthinkable—i.e. the dropped cill, the coarse deep canopy—suddenly become to all of us desirable? Visual fatigue with what is immediately past? Or some *Zeitgeist* affecting us like mumps?

To come now to the answers to the specific propositions and questions on which comment was sought. Casson and Pevsner, replying in short form, made ***valuations of technology*** that are in direct opposition—one seeing it as a stimulant, the other as a restraint—while Richards wrote what amounts to a brief essay on the relationship of architecture and technology.

Casson

Clearly technology will increasingly impinge upon architecture, but technological habits of thought need not be hostile to architectural habits of thought! They are valuable in that they needle him along out of the sidings and creeks in which he can become too cosily embedded. They are dangerous when they step out of their station and try to usurp the supremacy of personal observation. Nothing I fear, or do I hope? will ever destroy the occasional waywardness of the creative artist.

Pevsner

No—they need not to be hostile. They keep the architect to reason. They eliminate Neo-Irrationalism.

nisance of the memory-factor in seeing.

Banham

The symposium, as it appears in print, has alarmed a number of people, including some of those who took part in it. I stand by it as a document of our times—as it struck the ear at the time of utterance, it was as good a discussion on serious architectural issues as I have heard for some time, the transcribed version of it is as fair as legible comprehensibility on the printed page allows. If it falls below the levels of economy and cogency that are normally expected in serious *printed* discussion—and I am quite prepared to admit that it does—then consider how doctored and phoney some other printed symposia, allegedly transcribed from the living tape, must be. This is how we really discuss architecture nowadays.

No architect stood up to say that he was concerned with visual values because visual values are only one of six (ten? fifty?) equally important aspects of design that concern him, in practice, as a would-be Universal Man. If he wants to be concerned with visual matters, he will have to do some load-shedding in structures, services, social survey and so forth.

The aircraft comparison is dodgy; true in some cases, for sure (particularly de Havilland); but whose personality is stamped on the *Constellation*, one of the greatest airframe designs of the century, and who would guess that the *Canberra* and the *Gnat* were both Petters, just by looking at them?

Banham

Doctor Pevsner, I know, also hoped to hear more about this—at least on its historicist side—in the series, and I have alluded to it in both 1960/1 and 1960/4, but I find that at present it requires a different treatment to that available in the series; more psychiatry than history!

5

iv

Richards

I think there are some wrong definitions in the premises given. The opposition of architectural habits of thought to technological ditto suggests an assault by technology on the traditional conception of architecture. I don't believe this is taking place. The relationship between architecture and technology has not changed except in the sense that the complexities of modern technology have created a smokescreen which makes basic architectural principles more difficult to see. But they are not changing.

What has been happening is not a new habit of thought brought about by a different architectural technology, but a habit of assuming that technological values must supersede all other values, just because they are technological—a habit peculiar only to scientists, and not all scientists at that, but one that has been allowed to create a kind of mystique about science which has been accepted by ordinary people without question.

It is part of this mystique to assume, for example, that a new aeroplane which carries you to America a couple of hours faster must be an advance on the last one even if it is noisier, less comfortable and less safe—that makes speed into a race which everyone must try to win. Anyone who questions the actual gain resulting from those two hours of extra speed and thus tries to evaluate speed (standing here for purely technological improvement) with other non-technological attributes is regarded as turning his back on progress.

It is the old question of man's mastery of the machines that he devises. It is often assumed that the test of his mastery is the wonderful things the machines will do at his command, whereas in fact the test is whether he knows it when the moment comes when what the machine can do ceases to be an asset in terms of real human values.

The only sense in which technological habits of thought are hostile to architectural ditto is that people are perhaps becoming less good at discerning when this moment has come and therefore more easily deceived into believing that there is innate progress in the maximum use of technology, and that a world (or an architecture) dominated by technology is the only one that is 'modern.' This state of mind, however, even in relation to architecture, has not been produced by any architectural experience of the beneficial effects of the technological habit. It has been produced by a number of factors, mostly extraneous to architecture. One is the glamour given to technological developments by the press and other organs of opinion, who automatically paint a rosy picture of the Brave New World. Another is the natural tendency of each new generation to regard the last generation as stick-in-the-muds, wedded to the status quo. And all the resources of a science mystique are now available to label anyone who does not keep up as not only out of date, but set in irrelevant ways.

An architectural factor that has similarly encouraged the acceptance of science and technology as different in kind from what it has been before, as well as different in degree, and therefore justified in assuming a new and dominating position, is the nature of the evolution of modern architecture itself. The visionaries who were its pioneers were, or claimed to be, scientific visionaries, and the arguments they used against whoever was unwilling to accept the revolution they preached were scientific arguments. Modern architecture is now having to pay the price for using science as an instrument for clearing away all sorts of debris that had accumulated round it, the price being that, what everyone recognized as architecture having gone, all that is left which people recognize is science. The next stage is to make it clear that only the disposable parts of the old architecture have gone. Architecture itself has not changed; even if it is invisible because of the dazzling effect of the novelties of science.

To define matters thus is not, it must be made very clear, to reject the contributions to architecture of science and technology. Architecture must be fully aware of them for two reasons: first because vitality in architecture depends on making the most of present opportunities—of exploiting every word of the language that science puts at its disposal. The dead periods in architecture have been those lacking in curiosity about what it may not be possible to do next—and, secondly, because one of the functions of science is to bring architecture closer to the programme it has to perform. Our awareness and analysis of our own needs—and, indeed, our sharper perception of aesthetic values—are a product of scientific research.

But the exploitation of the new language provided by science and the exploration of the new avenues opened up by it, both in the interest of architecture, are not in themselves scientific processes. They need not lead to the assumption that everything scientific is necessarily beneficial, nor that everything scientific is relevant to architecture. Because of science, architecture will never be the same again. But because of science it need not be determined by science—or it is no longer architecture.

Architectural habits of thought therefore embrace, but without being invalidated by, technological habits of ditto. The so-called 'design team' is therefore not a substitute for the architectural mind, only a mechanism for making sure that the architectural mind is fully briefed about science and its obligations. The team is the answer to the complexity—not necessarily to any altered value—in modern technology. The visual appearance of a

Banham

Obviously I disagree, even while admitting the childishness of much of the technological mystique. Firstly, I think the sheer weight of scientific discovery, technological development, new techniques for organizing and handling information, the growing quantity of that information, the emergence of new modes of mobility and congregation, add up to a changed situation in the qualitative as well as the quantitative sense. The relationship of architecture to technique is not what it was when Choisy's *Histoire* went to press, nor what it was even when *Vers une Architecture* went to press. And incidentally—are the increases in airliner speed bought at the cost of comfort, quiet and safety? As between, say, the Viking and the Viscount, they don't appear to be—the latter is, in every way, a better aircraft from the passenger's point of view.

Again; does the press *create* the glamour of technology, or merely *serve* it?

building continues to depend on value-decisions which by definition are not identical with scientific determinants. These are the decisions to be taken by the architect, not because he is the head of any team, but because the fact of his taking such decisions is what makes him the architect.

Talk of the 'design team' thus tends to put the cart before the horse. It tends to assume an architect on the same pattern as the traditional member of the profession, to group a lot of other people of a more or less scientific kind round him and then to look for arguments as to why he should occupy the head. Would it not be more profitable to start with the process of design—in all the complexity that modern technological developments have brought about—isolate from that process those parts of it where the essential value judgments take place, and define the new nature of the architect accordingly?

In the light of the foregoing, my answers to the first question listed must be:

The hostility is unquestionably there, but instead of accepting the consequent divergence between tradition and technology, architecture should regard it as its biggest challenge. It has to create a new tradition, that will allow other than technological values to compete with modern technology; restore a balance instead of science making all the running.

Banham

It would indeed be much better, and I think that (for instance) Alloway and Page might be prepared to accept such a definition of 'the architect,' but it might well turn out that these value judgments were so different in kind and background information—ranging from basic grouping and traffic-planning at one extreme to balancing out the different relationships between glazing and heating systems at another, or resolving the ratio of applied to integrated art-work at yet another—that they might still have to be made by different men. Though by no means committed to the idea of teamwork as morally or absolutely good, I am far from convinced that a good design must necessarily bear the stamp of a single personality—on which point see my remarks below.

On the possibility of a ***changed position for the architect*** in a drastically overhauled hierarchy of command in the design team, Casson made two independent but related comments—

The prospect is not pleasing and only defensible if we no longer put higher values upon our more permanent physical surroundings than we do upon our expendables. These surroundings—in the familiar cliché—may accurately reflect the society for which architecture is created, but reflecting is a poor and negative exercise.

It is suggested in the symposium that architecture can be produced by a team of specialists in colour, heating, lighting, acoustics and market research working under a Leader who may or may not be an architect. The product that in industry results from this sort of exercise is the Corn-Flake Packet—efficient, salesworthy, disposable and, to me, without any interest or value whatsoever. (In architecture it is epitomized by the MOE schools at Wokingham and Worthing which to me are not architecture at all.)

Pevsner was equally crisp on this point, while Richards balanced leadership against vision.

Pevsner

The prospect is not only not pleasing, the whole thing is out of the question.

Richards

The visual appearance of the building is still what makes it architecture, and still emerges as part of the process of analysing and answering its functional needs, however much of this is done by science instead of by intuition. Appearance may be dominated by technology, but value judgments still have to be made, which a team cannot do. With different types of building, perhaps, the element in the team that makes these judgments may make them at a different stage (especially if we widen the team, as we should, to include the builder and the manufacturer of prefabricated components) and therefore the part of the operation that we are accustomed to call architecture may change its nature. But it must still happen, it must still (I think) be carried out by one man and that man is the only member of the team whose vision, right from the beginning, of the total end product is necessary to his job. This vision is more important than 'leadership'. I might except from this certain types of building in which the end product may be an automatic result of a scientific process, but this only means that certain types of building may cease to be classifiable as architecture. It need not mean, however, that they cease to have visual value; they simply join the other industrial products like motor-cars, etc.

It takes a bold, convinced (or complacent?) man to brush off the corn-flake packet or 'other industrial products like motor-cars' (cf. Richards, below). One of the great worries at the margins of the architectural profession is that building design just does not match the design of expendabilia in functional and aesthetic performance. Admittedly those functions and those aesthetics are not those of buildings, but the comparison remains damaging.

Again, it takes a bold, etc., man to assert that these things are without interest or value whatsoever (though I note Casson's defensive 'to me.') To plenty of architects and fanciers of architecture, these things are of considerable value—and if the MOE schools are not, it is because their aesthetics lag behind their functional qualities.

And again, if it is admitted that buildings are only 'more permanent,' then it seems unfair to discriminate between them and 'expendables.' They are simply long-term expendables.

The possibility of *a scientific aesthetic* received short shrift from everyone with the exception of Hastings, whose views are of such a different order as to need a different treatment, and are held over to the next page while the query on *sophistication and self-consciousness* produced widely diverging views; Pevsner bouncing the question out of court, Casson perishing the thought of any more sophistication, with which remarks may be coupled points he had raised earlier on design in general, while Richards contributed another model essay, this time in defence of increased sophistication. And lastly, as far as this part of the argument is concerned, the proposition to separate the rational aspects of town-planning from civic design was firmly squelched without any serious attempt to answer the ensuing query.

Pevsner

Not on a *fully* scientific base, but it is true that the architect refuses to accept help, when it would be useful to his buildings.

Richards

I think the aesthetics of a building can be defined after the event on a fully scientific basis, and as science learns more about human physiological and psychological responses more of the factors that have hitherto been classed as outside science can be regarded as scientific. But in so far as science is concerned with the predictable, there is bound to be a non-scientific element remaining in aesthetics—or creative art ceases to exist.

Banham

Certainly a *fully* scientific aesthetic is impossible now—but it is a thousand-per-cent more possible than it was thirty years ago. It is, I think, something towards which architects should work with peculiar determination since it will provide the visual designer with the only arguments with which he can persuade the tech-men in their own language. Consistently with the attitude suggested above, I too hold that architects must become more sophisticated, and accept self-consciousness as a working risk. I find myself at one with Richards in this matter.

Casson

Obviously science can be of help to the architect—he would be foolish to ignore it—but I cannot accept it as possible that aesthetics can be put upon a fully scientific basis.

This point is surely overplayed, but I would be against increasing in any way the self-consciousness which is already the architect's principal failing.

Nowhere, I suggest, is it made sufficiently clear that there is, in the last resort, no substitute for personal judgment and personal observation. I would always trust my own eyes rather than the researcher's questionnaire-form. The latter can be useful—though often, particularly in sociology, inevitably un-precise and therefore misleading. By all means let us be encouraged to make use of information handed to us, but not at the expense of going to look for ourselves. Failing to do this can lead to a version of Russell-Lynes Disease where the patient spends so much time training his taste in a subject that in the end he can no longer enjoy what he is having trained taste about.

Richards

Self-consciousness and sophistication have very little in common. The former is the result of everybody knowing (through the printed word and the reproduced picture) what everybody else is doing and has done in the past. It is part of the modern world and our changed attitude to history springs from it—but it was equally the starting-point of the least sophisticated type of nineteenth-century period revivalism. Self-consciousness is the more inseparable from the modern processes of creative design because science itself is continuing to unveil the mysteries of creative activity and thereby increase our consciousness of how the process works. In spite of the endeavours of the action painters and others to discover territories where unselfconsciousness can still operate, unselfconscious art is inevitably on the way out.

Increasing sophistication about history is partly the result of the continually more rapid revolution of the cycle of taste, resulting in a revival of interest in more and more recent aesthetic ideals, even nowadays those whose original authors are still extant, and partly the result of the historian himself having adopted more scientific methods and being less content with the romantic and evocative, so that instead of being 'one of them' (i.e. the people from whom the creative artist is trying to assert his independence) he has become 'one of us.' The consciousness of history that this sophisticated attitude induces in the artist is necessary because, in the new circumstances, it is the means by which new ideas are assimilated into an accepted language or idiom; in the days before self-consciousness the equivalent means were the evolutionary ones residing in craft traditions and the social ones resulting in the leadership of taste by an elite.

There remains the Hastings contribution, which is different from the other three in that, while using the propositions as a point of departure, it proposes only to answer 3 and 1, in that order, in an attempt to get to the ***heart of the ideas underlying the whole series.*** It is thus most suitable to appear at the end of the sequence of replies, both for its aims and content, and as a pretext for the series editor to attempt to sum up his own position toward the series as a whole.

The argument goes round and around, but at its hub is the question whether the architect should remain building's Top Person. The alternative, that he should become instead, one (perhaps a minor one) of a design team composed not only of organizers and engineers, but of specialists in the biological and social sciences, carries with it the tacit assumption that the aesthetic issue is now secondary. Or dependent. But what do those who talk about 'putting aesthetics on a scientific basis' really mean? They mean, it seems to me, that *because* late Gothic is susceptible to analysis in terms of the laws-of, *therefore* the data provided by sociological, psychological and technological studies may well produce architecture of a sort better than architects can achieve by toiling in the steps of a mistress art. A slight misrepresentation, that, but it serves to highlight a fallacy which seems to me to dog the scientific attitude—the fallacy that efficiency is a rational end instead of a rather unnatural passion (also a rather unnatural fashion). The vital importance of science to-day lies not in the efficiency it can impart to the machine, but in the passion it inspires in a society which owns no other God. Computers are wished on us—I use the term advisedly—by people who love computers (the word 'love' I also use advisedly). These are not ice-cold brains trying to beat sense into fuddy-duddies but mystics pursuing a grail, great lovers generously eager to share their mistress with anyone who shows a moment's weakness. More power to them. And to their mistress. Even when accepting the offer to skip into bed with the little lady, however, one should remain aware of the nature of the confidence trick.

The point I am trying to make is that, for the right kind of man, science is a tremendous lark. If he is the right kind of man for science he will disguise this lark as a bit of basic thinking, but in fact anything productive that comes out of that thinking was put into it by him when he found himself in love with the scientific attitude. The consequences for architecture of an amorous tangle with this passionate person are great, but this is not because rational routines ought to supersede traditional, or scientific, artistic; it is because one kind of mad enthusiast is wresting the creative initiative from another kind of less mad enthusiast. Both are equally mystics (or lovers), they just happen to have a yen for a different kind of mystery. And since the mystery of science has gathered to itself a fabulous goodwill in this century, it is sensible to use the goodwill for creative architectural purposes.

The argument that aesthetics could have a scientific basis can thus mean one of two things. It could mean (*a*) that you can furnish a good *reason*—afterwards—for making the aesthetic decisions you do make. Or it can mean (*b*) that the scientific attitude to life provides a wonderful field for aesthetic exploration. So long as one is quite firm in denying technology any monopoly of reason there is every reason during the 'sixties for aestheticians to have fun and games with science (in fact it is their obvious field of operations) and exciting new designs for living might well transpire. Only so long, however, as they accept science as a stimulus for emotional fun and games and do not commit the basic howler of believing they are substituting the rational approach for the creative impulse.

I have put question 3 first because it affects the way one answers the first question. Implicit in the phrase 'technological habits of thought are hostile to architectural habits of thought' is (I take it) the concept that technological habits are scientific and architectural habits aesthetic, hence science and art are in for a tussle. But if there is any sense in the answer to 3 it follows that 'habits of thought' (an unfortunate phrase really) meaning in this context processes of feeling, are creative and thus basically aesthetic, i.e. emotional, which means that the distinction is not between art and science (emotion and reason) but between one kind of artist and another, or one kind of emotion and another.

Now, if you are going to say, as you have every right to, that the scientific art represents the spirit of the age better than any other, hence scientists should be the artists in charge of architecture, then it is obvious that the architect's position in the design hierarchy will be affected. In those circumstances he might well have to step down. This, however, is an entirely different thing to saying that 'the head of the design team cannot be responsible for the visual appearance of the building.' By visual appearance we mean the way the article materializes in the physical, i.e. the apparent world. The ergonamist or group psychologist might insist that the way the building '*works*' is more important than the way it *looks*, but all he is then saying is that there are other senses than those of sight by which we would judge its 'appearance.' As it happens there are, but in man the sense of sight is so far in advance of the other antennae of contact that it's a safe bet that our ultimate judgments on the buildings we '*feel*' will be dictated by this, the most highly developed of the tactile senses (so long, that is, as other considerations don't disturb protocol. Aircraft and radios, mentioned by R.B., happen to subordinate the visual to other senses—immediately visual aesthetics cease to command first place).

We now come to the distinction that matters. If the argument that science should dominate aesthetics means that we must learn to subordinate visual to scientific criteria then it seems to me to be merely warming up an old heresy which amounts to no more than maintaining that in building sight is not the most important of the five senses.

If, on the other hand, it means that science should be permitted in this emergency to stimulate new ways of seeing to which tradition (i.e. habit) tends to blind us, then the argument seems to me to be not merely sound but stimulating. In that case, however, the *seer* never loses his position as director of operations. You are welcome to call him by any name you like, but you will simply be inviting him to exchange functions with the architect. Somebody has got to organize the assault on the five senses in the order in which they operate and the party who does so is bound to remain the Top Person in building.

To sum up: what matters to architecture is not the rational content, but the emotional head of steam. Scientists have succeeded in working up an impressive head of steam for their chosen ark of the covenant and so have acquired the emotional initiative in this century. Therefore, architecture not merely should, but must woo science for the right and proper purpose of stealing its steam. If, as a side-kick, we get greater efficiency, well that's just swell, isn't it?

Banham

In fact, I didn't mean either of these things. By a scientific aesthetic, I meant one that uses, as the basis and guide of design, observations (made according to the normal laws of scientific evidence) of the actual effect of certain colours, forms, symbols, spaces, lighting levels, acoustic qualities, textures, perspective effects (in isolation or in total 'gestalts') on human viewers. These are precisely the sort of matters that are covered by the bibliography to Llewelyn-Davies's paper in 1960/2, and I maintain that armed with enough information of this kind it should be possible for whoever is responsible for the visual side of a building to produce, say, a church that is more likely to produce a sense of spiritual elation than physical depression—an ability that is manifestly not shared by some church designers at work at present. I would not dare to propose that this was a way to produce guaranteed masterpieces, but it might well be a way to prevent guaranteed failures being produced with the best will in the world by men who insisted on judging everything by their own subjective responses, supposing them to be universal. Nor do I think that this cuts out *ultimate* personal judgment, but it should get that judgment out of the fog of ignorance, thickened by facts carefully chosen out of context, that commonly passes for architectural theory today.

conclusion

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As I read the Hastings contribution, it *could* be read as a proposal to play science for kicks. Such a proposal will shock and repel a large number of persons inside the sciences, and quite a number of persons outside the sciences whose theoretical position is based on the idea of science as a tough and noble discipline that they themselves do not follow, but would if their callings permitted them—that is, they are playing science for one sort of kick already. The scientist cannot play science for kicks, any more than an architect can play architecture for kicks—in either case it is a man's calling, and the sort of calling that is going to absorb most of his capacity for solid thinking. What one does for kicks is strictly outside office hours, for compensation, stimulation, relaxation or whatever. To treat science in this way may be one very proper attitude, in the present condition of architure in a technological society—though it is not the only one: the science-hobbyist who perfects himself in one small sector of applied science or field-work (hi-fi enthusiasts, aqualung geologists) has also made a creative liaison with science, though at the manipulative rather than the intellectual level.

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This phase may well be short—as, say, in the case of a purely chemical addiction—or it may be long where the skills involved are greater than the mere location of a vein and the sinking of a hypodermic needle into it, but in either case, the destination of the kick-seeker, whether he likes it or not, is saturation and tolerance, the condition where he gets no further lift: there had to come a time when Berenson had rounded up all the available *fondo d'oro* altar-paintings in Tuscany, and the *Trecento* kick ceased to be life-enhancing.

The same is true of all finite, simple kick-seeking, but science, speaking comprehensively, is neither finite, nor simple. Its primary fascination will always be that no man can embrace the whole of it, and even in one particular field, the limit of research is apt to be advancing faster than even the talented amateur can pursue. In Science-fiction, which is science-for-kicks in almost its purest form, not only do new fields of subject-matter constantly open up for exploitation, but old ones are equally constantly being revived because they have been extended by new research or theoretical revision. The man who has given himself to the wonders of science—and let us be honest, science is *wonder*-ful in the derivational sense of the word—is never likely to achieve tolerance to its stimulations.

Now modern architecture, in its most dizzily productive phase, from about 1910 to 1927, was doing just this, playing science for kicks, surf-boarding the crest of a wave of invention, discovery and application that finally broke about 1930, to be replaced by the second wave of twentieth century technical creativity (jets, atomics, radar, rocketry, antibiotics, synthetics, new cosmogenies, etc.) towards the end of the decade. But architects had abandoned the surf-ride before the wave broke, stood still and had started to take science seriously (compare the Gropius of 1930 with the Gropius of 1923) and their science-oriented architecture began to lose its vitality, as they were overwhelmed and submerged from behind by the second wave.

The reasons are not difficult to see—as was said above, science is a whole way of life, and so is architecture as it is supposed to be practised to-day. The practitioners of neither can play the other for anything but kicks, and for an architect to pretend to take science 'seriously' is an act of monstrous arrogance. Critics who complain that architects who demand fanciful vaults and other 'science-fiction' structure are being frivolous about science and don't understand what it is all about, are wide of the mark on both counts. The man who doesn't get any kick out of science will, by definition, get no kick either from the Twentieth Century which, as Hastings observes, knows no other God, and if he doesn't feel the pulse of his time he is clearly unfitted to put up monuments symbolizing or otherwise expressing its values. The man who plays science for kicks is, in our present situation, a life-enhancer, and if he functions in the visual field he will be the better able to produce the kind of symbols by which we identify ourselves as members of the scientific adventure to which we are all committed in our smallest acts—such as reading this print, or turning on the light to make its reading easier.

Nor, for reasons outlined above, can it be decently said that those who play science for kicks don't really know what it is all about. Admittedly, the kind of expertise needed to enjoy the productions and achievements of technology and science, and to go on enjoying them, is not necessarily the same kind of expertise as that required to create or control them, but—in practice—the overlaps are considerable, and the connoisseur of space-fiction, for instance, must get to know a lot about ballistics, rocket dynamics, gravity, radiation, planetary atmospheres, galactic structures and cosmic dust if he is to get anything like the full value from his addiction. Similarly, to get anything like the full flavour out of the current vaulting kick, he must eventually master at least the outlines of some very complex mathematics.

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Reyner Banham
1960 series editor

THREE POWER STATIONS

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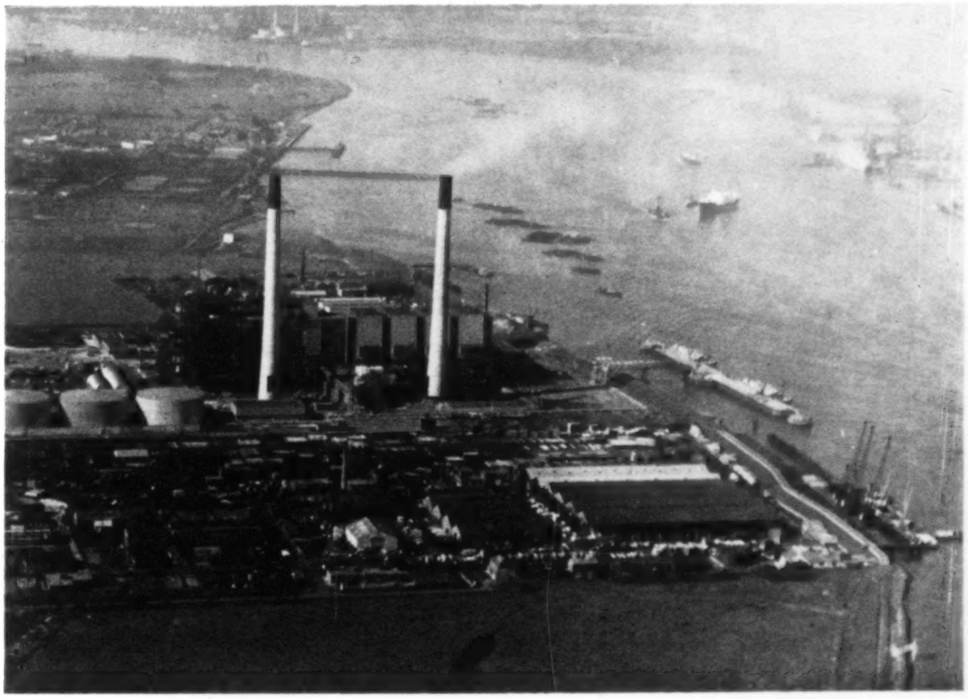

Aerial view of Belvedere power station, Kent, with the Thames on the right. The turbine house is still under construction.

Even where the boilers, turbines, etc., are enclosed—these are all conventional, non-atomic power stations—there is now a strong sense that the visible architecture, far from being a monumental composition in its own right, is simply a suitable skin drawn over these mechanical parts, and also acknowledges the difference in functions between them, so that the boiler installation and the turbine houses can be distinguished even by an outside viewer.

On the strength of these three designs by Farmer and Dark one can assert, with some confidence, that the architecture of power stations has now taken a decisive turn in the right direction, but one very important problem remains still to be dealt with. This problem is not initially under the architect's control, and there is little that he can do about it from his side—it is the problem of siting. Because atomic power-stations are news, and because they have usually gone to spectacular areas in unspoiled country, their siting has been vigorously discussed, to the exclusion of all other aspects of power-station siting.

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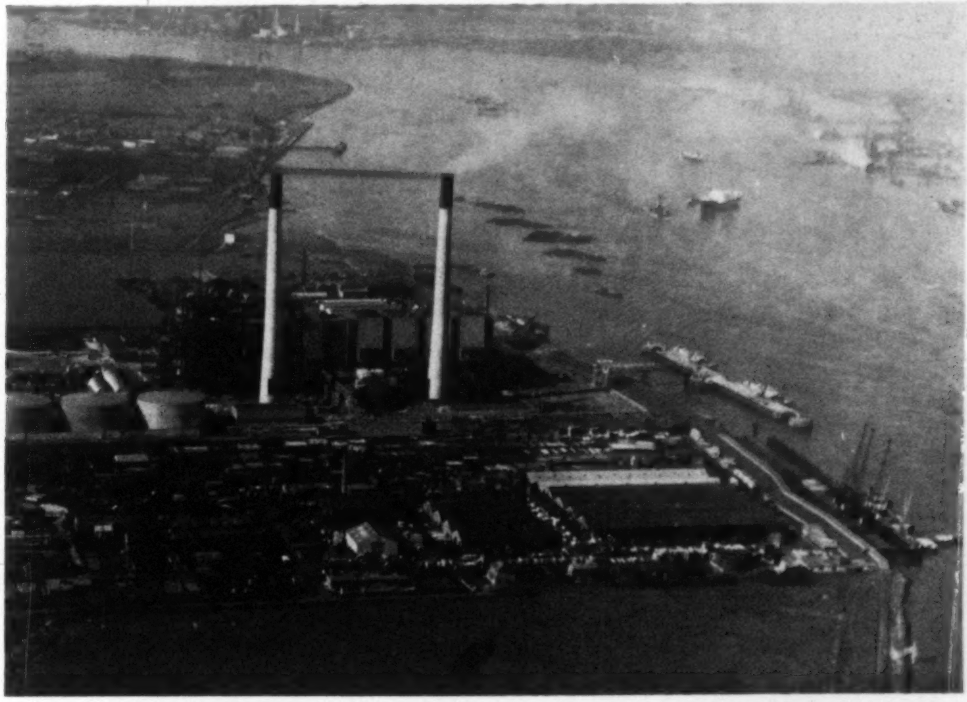
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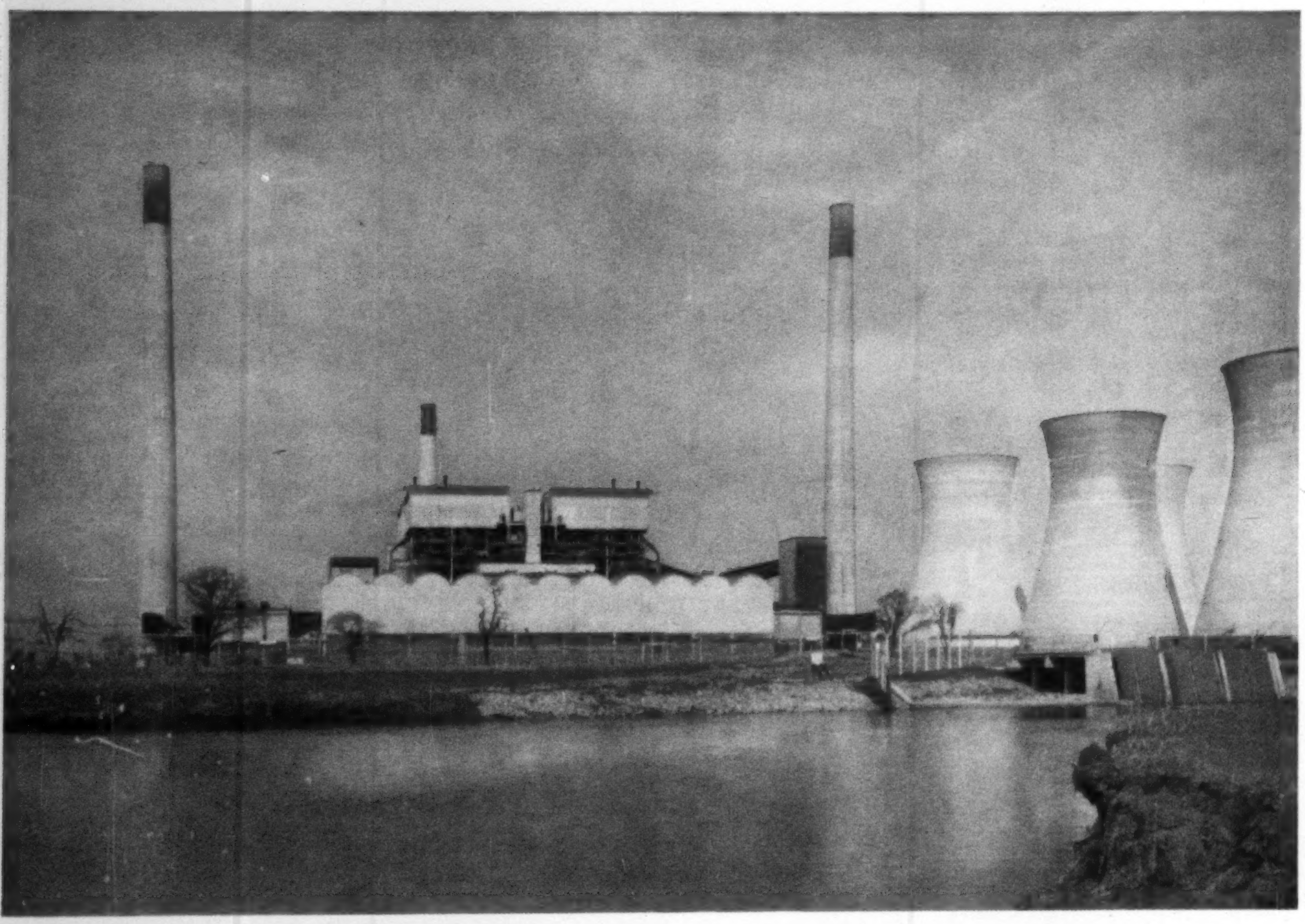
THREE POWER-STATIONS

for the Central Electricity Generating Board

ARCHITECTS **FARMER AND DARK**
partners in charge: Frankland Dark (design); Thomas A. Eaton (executive)



1

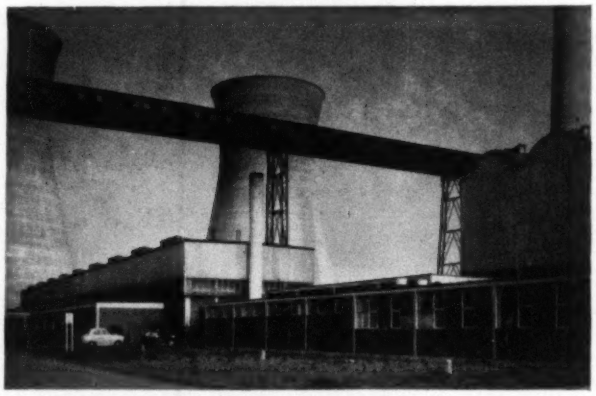
1, WILLINGTON, DERBS.

Two stations, both coal-burning and each with a capacity of 400 megawatts, adjoin each other on the same site. Willington A is illustrated here. Willington B (see AR Preview issue, January 1960) is under construction and will be commissioned in November 1961.

The A station consists of four turbo-alternator sets. The boilers are arranged four-square with two pairs of turbo-alternators in their turbine houses flanking two sides of a square, and air-heaters, dust-collecting plant and ducting on the other two sides, the latter connecting the boilers with two free-standing reinforced concrete chimneys, 425ft. high, one on either side of the station.

Precipitators, dust-collectors, fans, etc., are fully exposed, as also are the transformers associated with turbines and plant control. This is an early example in Britain of a power station with machinery in the open instead of being enclosed within buildings.

The facing brickwork at low level is a dark purple grey with black pointing. Cladding to the main buildings and boiler drum covers is anodized aluminium sheeting capped with black eaves flashings. Glazed areas have aluminimum bar patent glazing. Colour is used

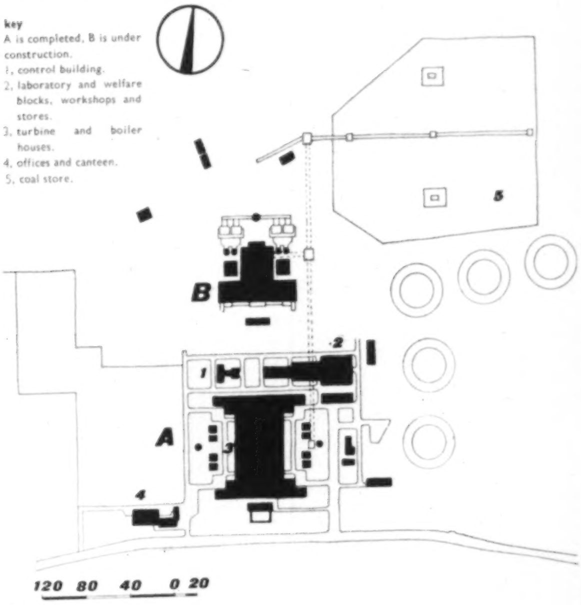


2

1 (top of page), general view of Willington A power station from across the water.
2 (above), the workshop, stores and welfare buildings, and the overhead conveyor linking the station with the coal-screening plant.

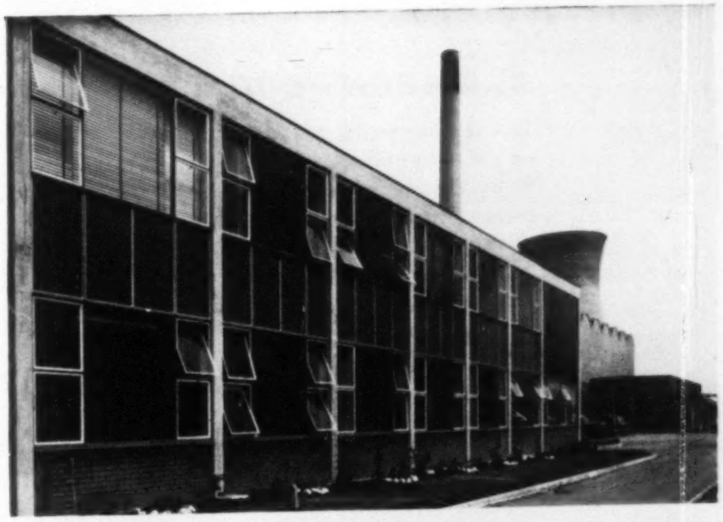
to identify the different elements of the exposed plant. Workshops, stores, offices, canteen and welfare buildings, pump houses, control and switch rooms, etc., have exposed concrete frames with brick, aluminium and glass claddings.

Architect in charge of Willington A: R. J. Foxton; assistant architect in charge, D. MacEwan; assistants, P. Rule, A. J. Reid, R. C. Richards, C. Blake, K. A. King. Main engineering consultants, Ewbank and Partners.


key
A is completed, B is under construction.
1, control building.
2, laboratory and welfare blocks, workshops and stores.
3, turbine and boiler houses.
4, offices and canteen.
5, coal store.
A
B
1
2
3
4
5
120 80 40 0 20

site plan

3, the administration building, with part of one turbine-house in the distance.
4, main station from south-east: two boilers in centre; precipitator and associated ducting on right; junction tower on extreme right.
5, screens and pumphouse, with barrel-vaulted roof of turbine-house behind. This and the photograph above show the extent to which plant in this station is exposed.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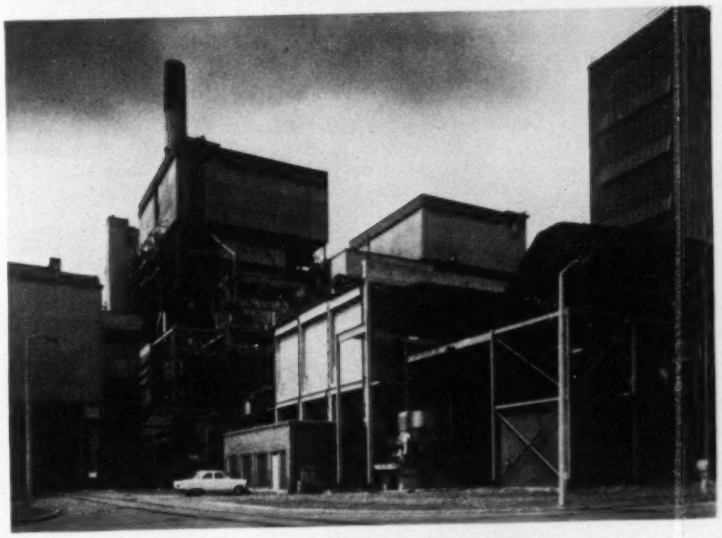
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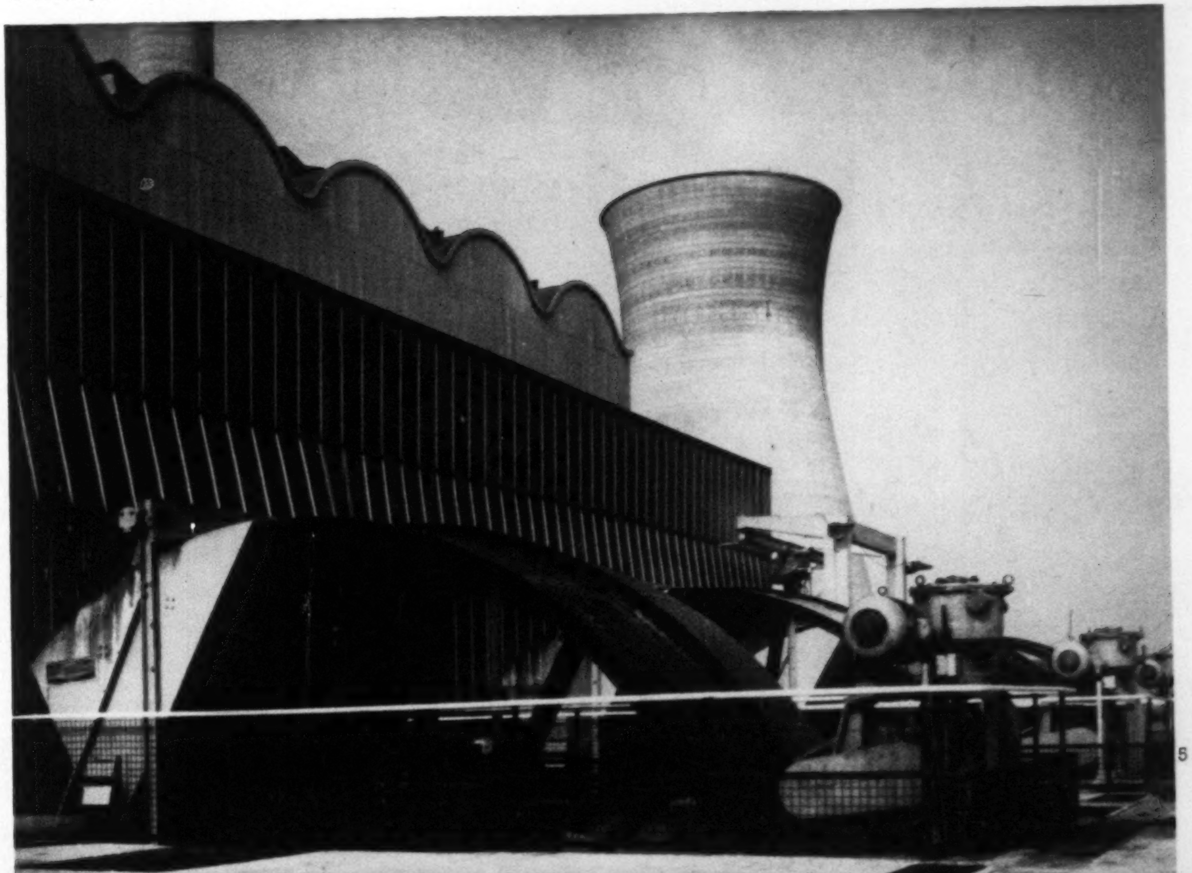
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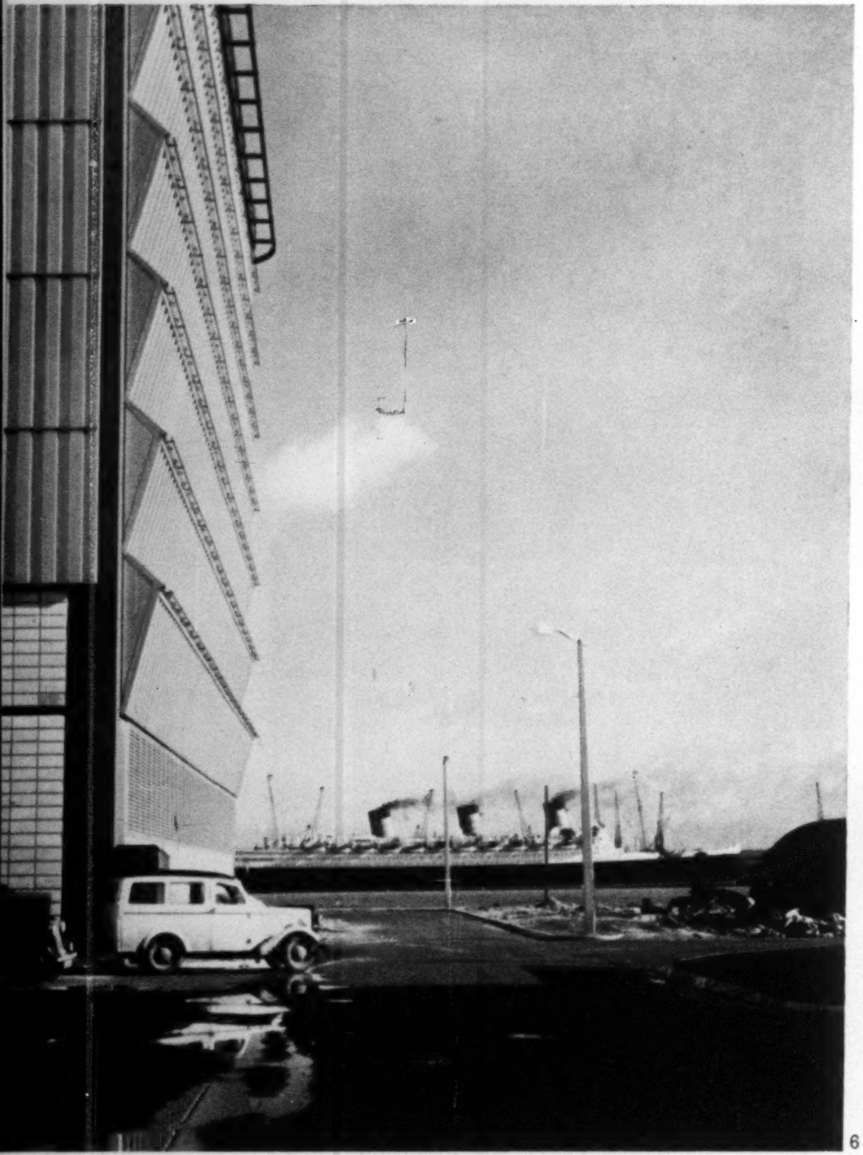
2, MARCHWOOD, HANTS.

The station, which has an output of 480 megawatts, is on the edge of Southampton Water. It is oil-burning but is designed for adaptation to coal if necessary. A single building 600ft. long and 300ft. wide houses the turbo-alternators and the boilers, the boiler-house portion being 33ft. higher than the rest. This building is of welded steel frame construction, with hidden bolted joints in the main stanchions, which are of box section. They are set out in alternate 26ft. and 39ft. bays. Two chimneys are symmetrically placed on the far side of the main buildings from Southampton Water.

Up to operating floor level there is a 10in. thick reinforced concrete block wall, and above this cladding of aluminium panels backed with insulating board. The cladding has a saw-tooth section, designed to use the minimum amount of glass but to admit the maximum amount of natural light. Roofs are aluminium decking.

Ancillary buildings are steel framed with aluminium sheeting and roof decking.



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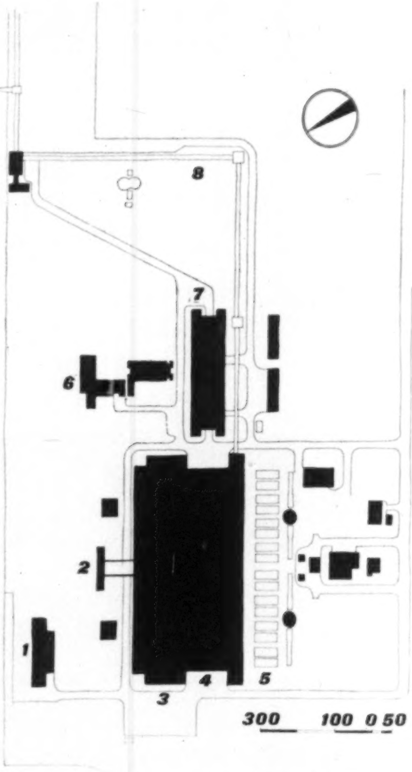
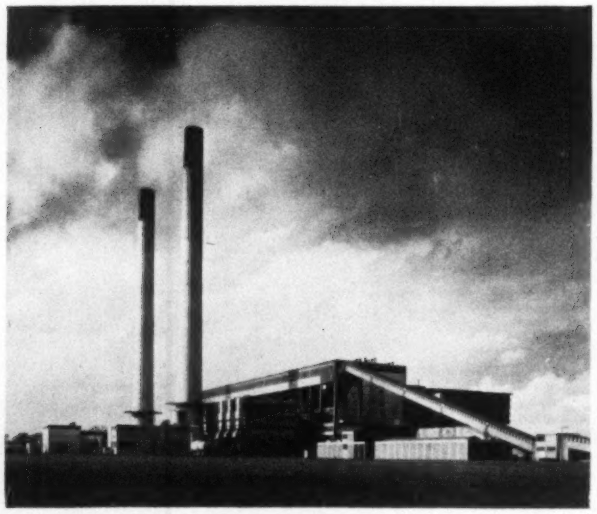
Architects in charge: the late Noel Hunter and A. C. Murray; assistants, R. Bailey, R. Beckett, A. G. Derbyshire, G. Jones, M. New, A. A. Sharpe, J. H. Voelcker. Plant and electrical engineering, CEGB (Southern Projects Group). Civil engineering consultants, Sir William Halcrow and Partners.



key

1, cooling water pump house.
2, administration and control.
3, turbine house.
4, boiler house.
5 precipitators.
6, welfare and canteen blocks.
7, workshops and stores.
8, coal conveyor.

site plan

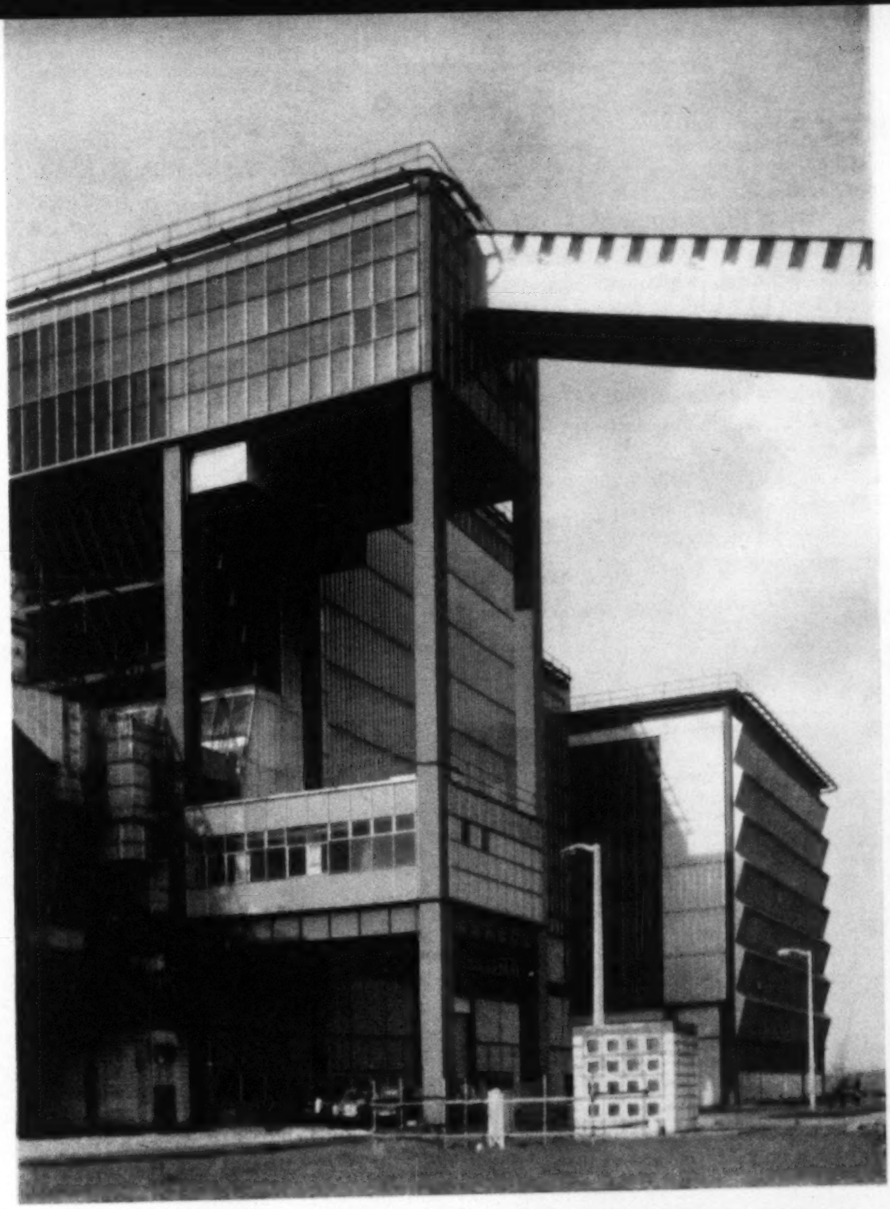


7

6, the end of the main building, which combines turbine-house and boiler-house, showing the proximity of Marchwood power station to Southampton Water (the Queen Mary in the background).

7, general view of the station from the south, with coal-conveyor on right and the row of precipitators between the main building and the two chimneys.

8, close-up of the end of the main building from the south, showing the use of strong colour in the cladding, etc.
9, main building (turbine-house side) from the east, with transformers in foreground and control block in the distance on the right.
10, end of main building from the south, looking towards the link between the boiler-house and the turbine-house. On the left, below the head of the coal-conveyor, is the workshop and stores block.
11, interior of the turbine-house.



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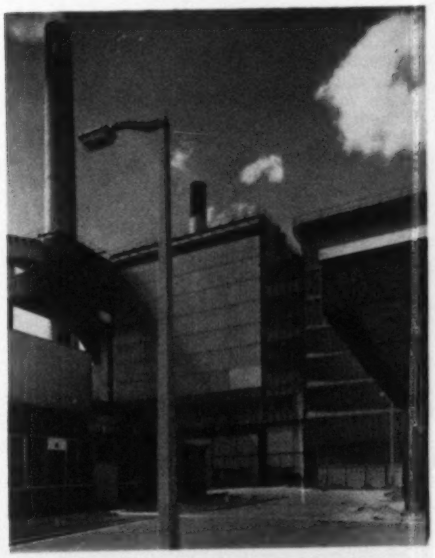

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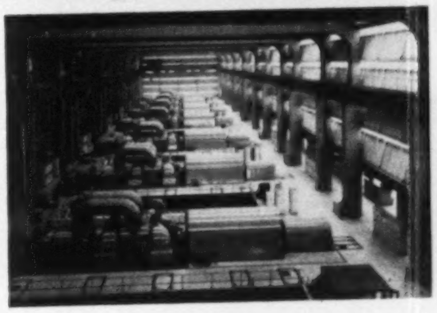

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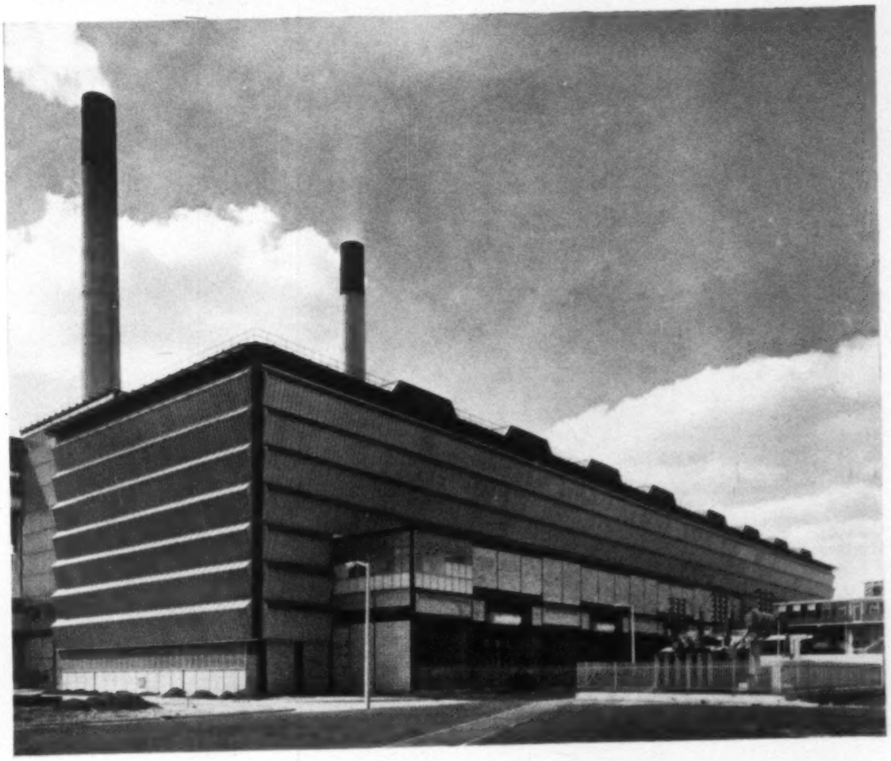

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3, BELVEDERE, KENT

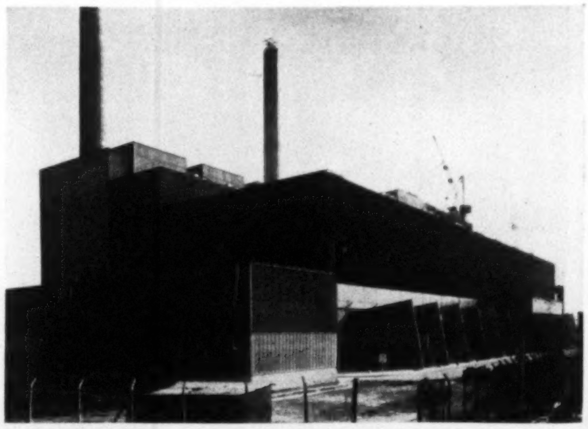
On the south side of the Thames, across the river from the Ford works at Dagenham. The station has an output of 480 megawatts, with six generating units: four in the northern section of the main building, which is placed at right-angles to the river, and two in the southern section.

The building is steel framed, clad in aluminium in three colours: anodized natural silver, pyluminized and anodized black. It has large areas of patent glazing and a base faced with yellow brickwork.

The control room is in the centre of the main building instead of being in a separate structure as at Willington and Marchwood. Although the Belvedere station is oil-burning, it is designed for adaptation to coal if necessary. The oil is delivered in tankers by river.

12, welfare block seen from the west side of the administration block, with water-tower and workshops in the distance.
13, the main building from the north (turbine-house side), with the pump-house on the left.

Architect in charge: A. C. Murray; assistants, A. Debricki, C. C. Garment, W. Garretts, B. E. Kenchington, A. T. Mallock, P. G. Shackleton, A. A. Sharpe, R. C. Stride. Plant, electrical and civil engineering, CEGB (Southern Projects Group).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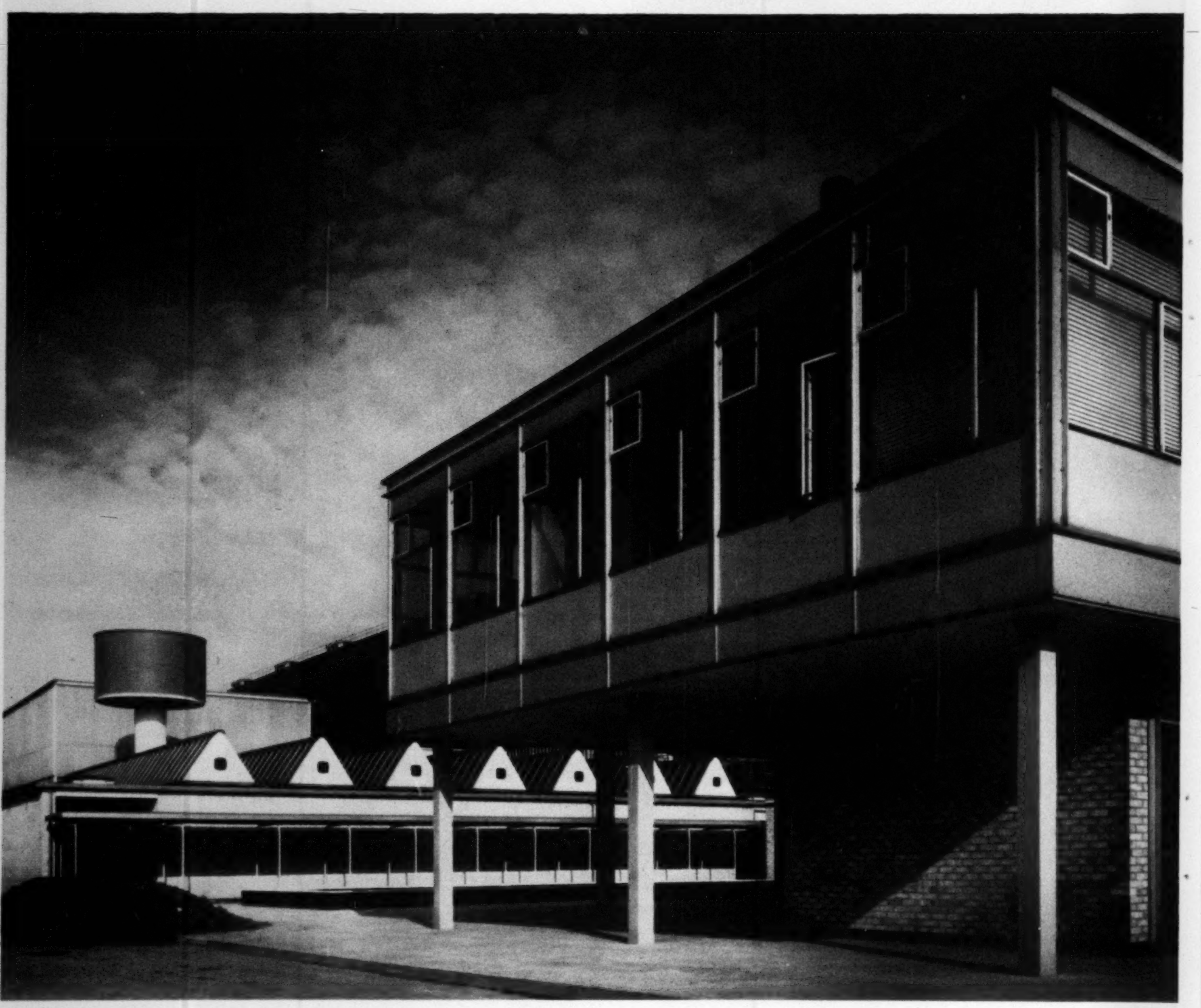
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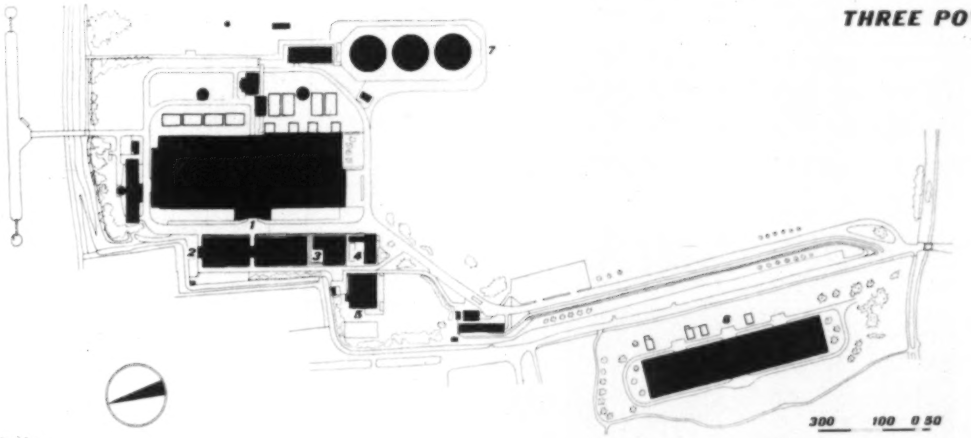
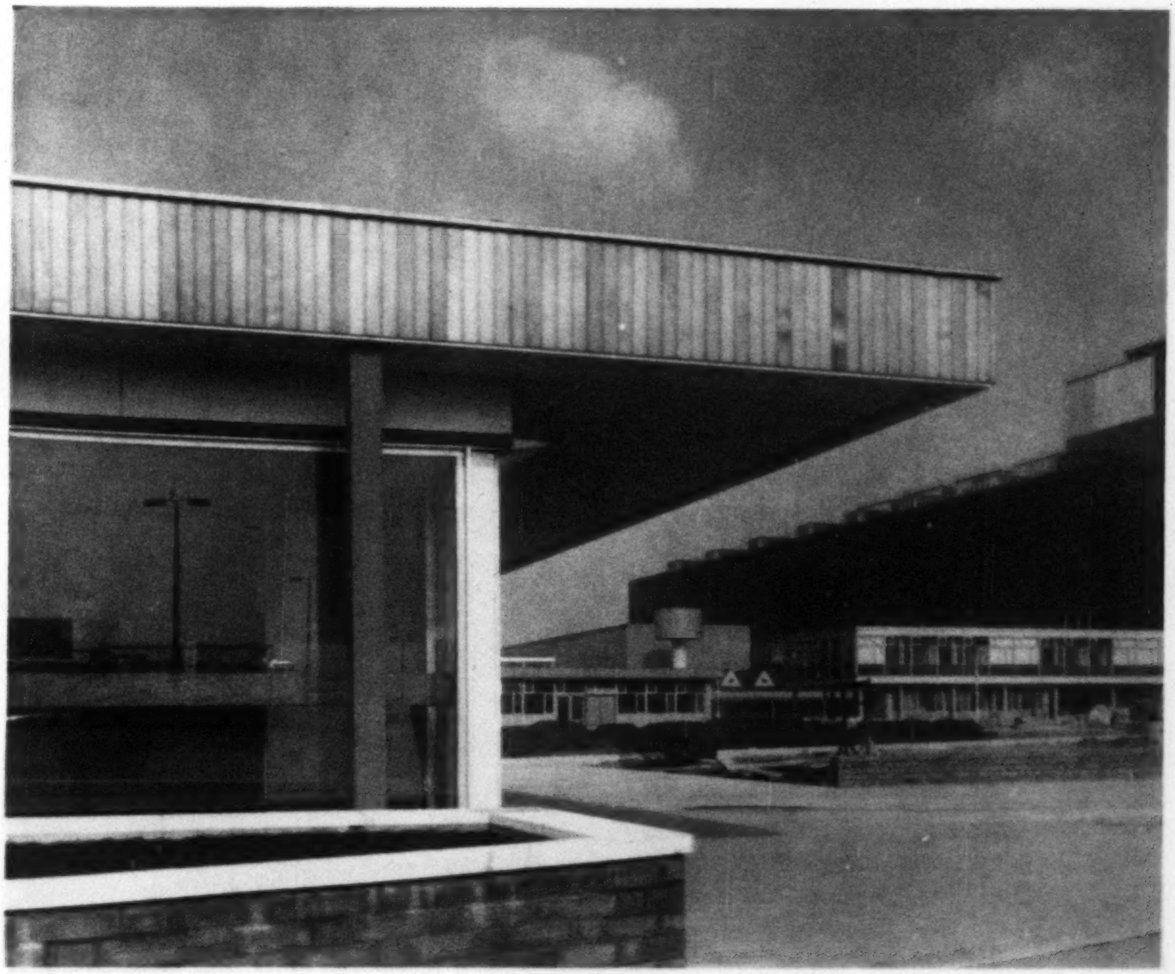


key
1. turbine house and boiler house.
2. stores and workshop.
3. welfare block.
4. administration block.
5. canteen.
6. switch house.
7. oil storage tanks.

site plan



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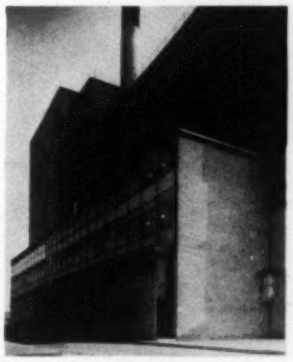

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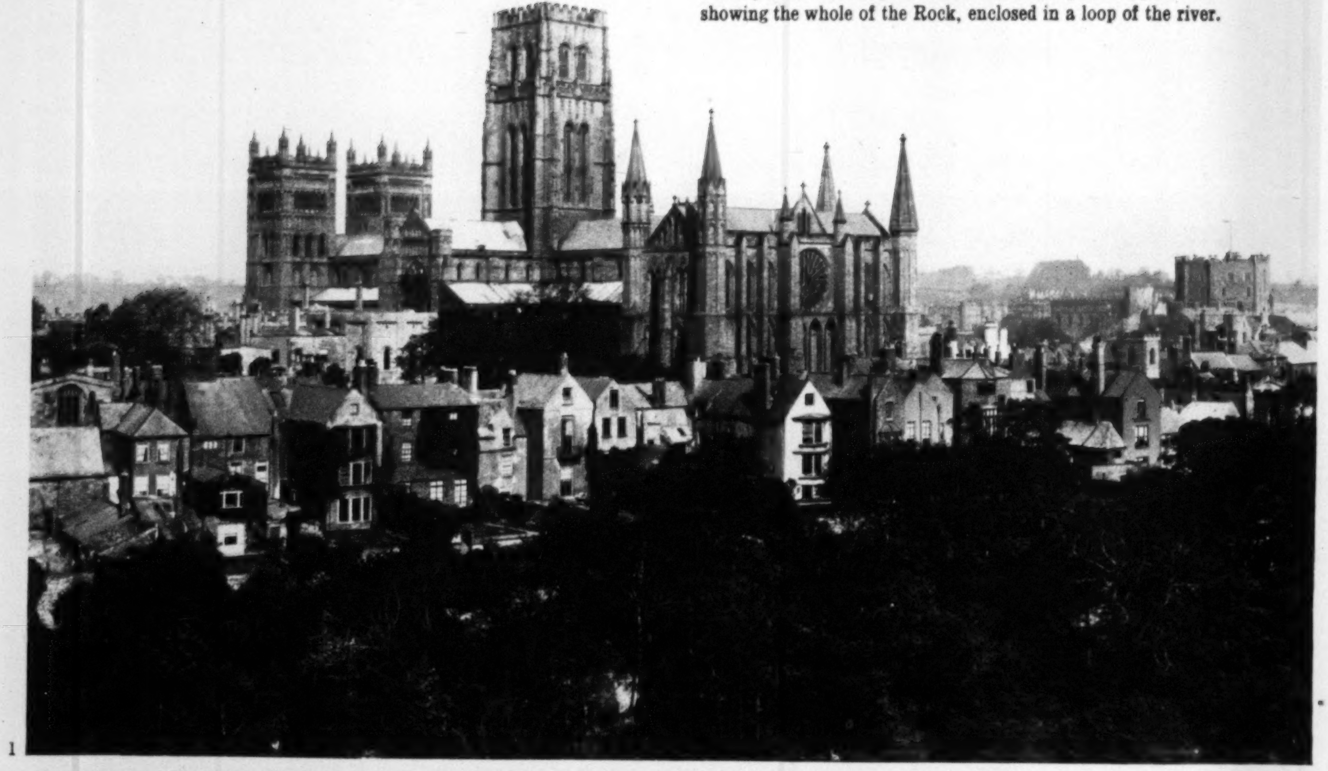
16

14, corner of the welfare block.
15, end of the main building, with three-storey north accommodation block in front of it.
16, foot of circular staircase in entrance-hall of administration block.

1, Durham cathedral seen from the south-east, across the river. The houses in front of it (for whose retention the article opposite pleads) provide a perfect foil to the great building riding above them, and with the cathedral they and the houses along the streets leading up the Rock on which it stands, create a unity found in few other places. 2, air view showing the whole of the Rock, enclosed in a loop of the river.



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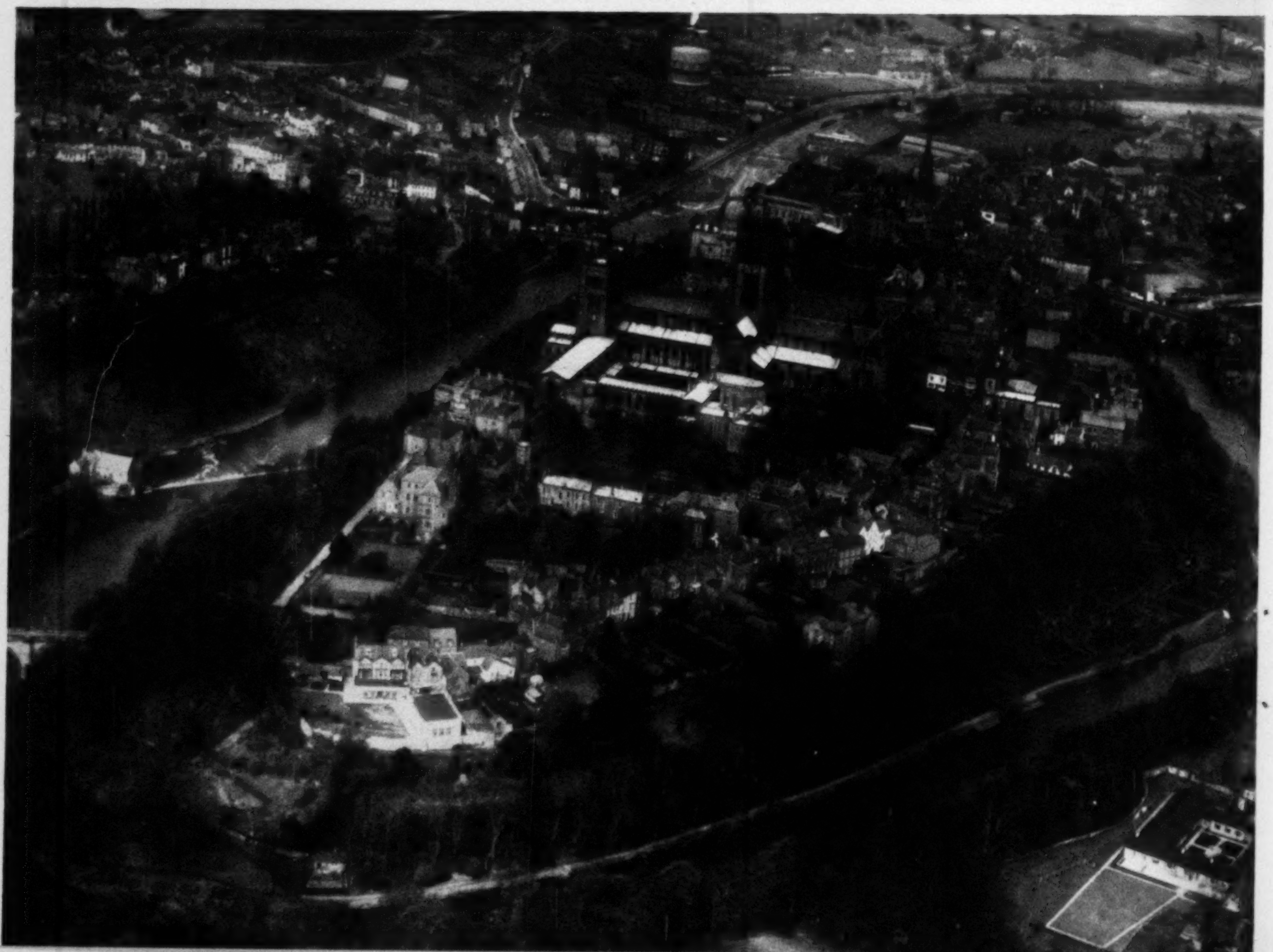


2

Andor Gomme

DURHAM ENDANGERED

It is not often that THE ARCHITECTURAL REVIEW devotes an article to a plea for preservation. It is rare that a case for complete preservation can be made out. But the centre of Durham, which is threatened by developments now under consideration by the university, is unique, the most perfect—indeed the only—thing of its kind we have. Lincoln might once have been another, lesser, such. But Lincoln's setting has been utterly spoiled. Durham is the only one we have left, and we cannot allow it to go Lincoln's way.

Durham is a most astonishing survival, not only for its assembly of castle, cathedral and monastery remaining virtually untouched together on the Rock, but also as the single unit of architecturally visible civilization left in a region otherwise wholly corrupted by industry. Durham is, as one miner put it, 'the miner's haven of peace, his Mecca'. It is of immense local importance that it should remain so; and the university, of all bodies, ought to be the defender of the region's cultural heritage, not its destroyer. And yet Durham is much more than this. For 'Every cathedral city was designed to be a perpetual memorial to the history, continuity, struggle, and, in part anyway, the triumph of the Christian Faith, on which European civilization is so largely founded. So heightened is this function at Durham by nature of the tremendous setting that the question of its mutilation becomes a matter of moment not merely to Durham or Britain but to Christendom.'*

If the university destroys the group of houses threatened by its building scheme, not only will the county lose the most important of its very few remaining signs of urban civilization, part of what is in fact the *only* extensive collection of Georgian architecture surviving for miles around; but much of the spiritual and physical presence of one of the world's greatest buildings will be taken away.

---

* *Cathedral City:* a plan for Durham: by Thomas Sharp (Architectural Press, 1945). This report, commissioned by the City Council, contained (besides a denunciation of the Power Station project and—as an alternative to a destructive road proposal—a scheme which is now being adopted after no fewer than 25 years of struggle) an evaluation of the city's architectural-planning character: the first essay in that appreciation of *townscape* which has now become more generally recognized.

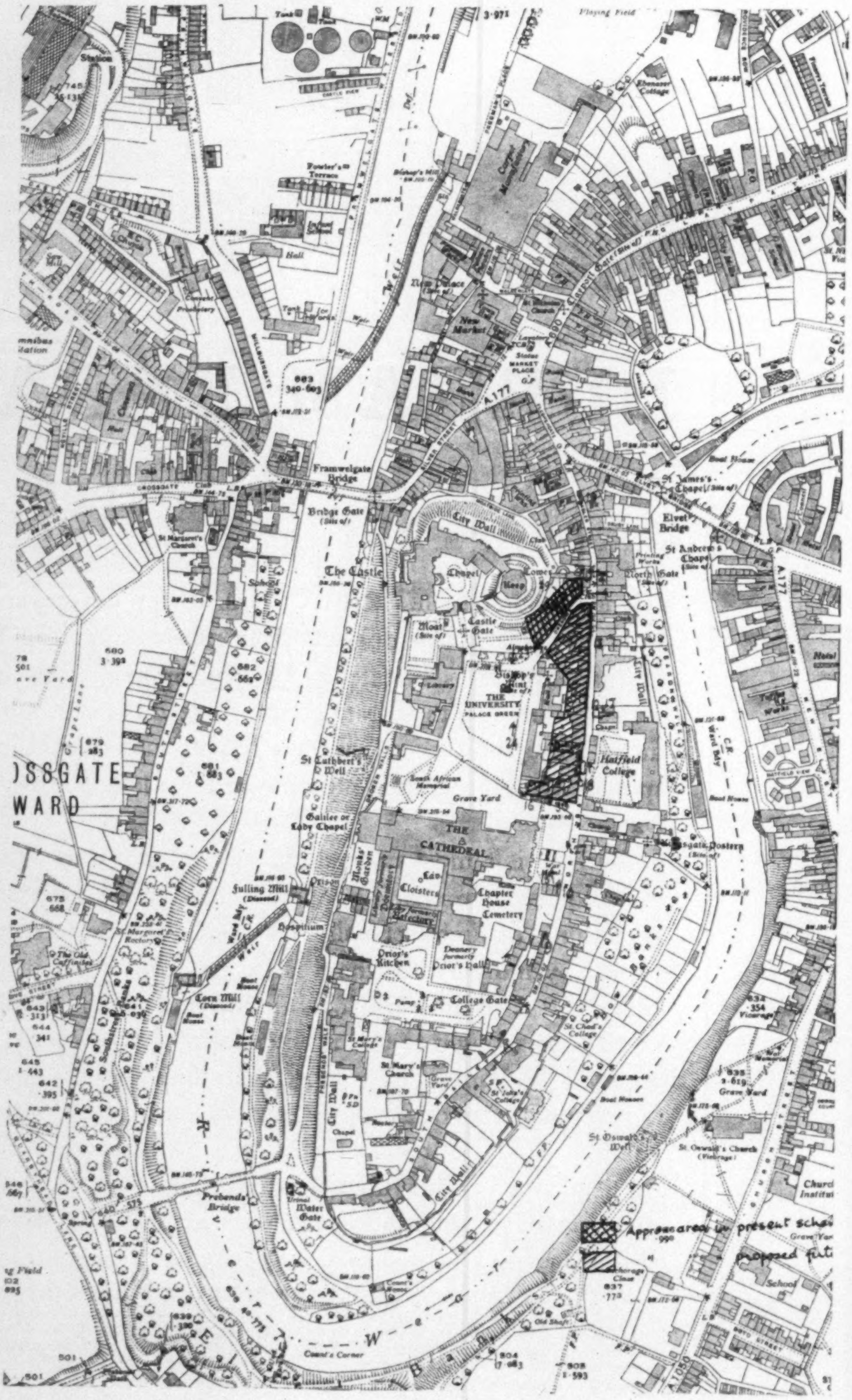
Although Durham is in danger the danger is not spectacular—no one wants to pull down the cathedral: but, perhaps, for that reason, it is all the greater. When an immense power station was proposed at Kepier, only a mile from the centre of the city, the effect it would have on the life and appearance of Durham was obvious—at least to the handful of people who eventually defeated it: an astonishing modern variation on the David and Goliath theme. The present threat has few of these dramatic possibilities: it is less obvious, less known and less talked about; and yet for all that, it is essentially even more penetrating and aims even more directly at the heart of the great creation that Durham is.

The threat comes from the university, which already owns and occupies most of the buildings on the Rock on which the cathedral stands. The intention now is to demolish a whole group of these, eighteenth- and nineteenth-century domestic buildings, none more than 200 yards from the cathedral and some that are almost its nearest neighbours, and to replace them with largish blocks of college buildings. The result will be to alter permanently and disastrously the setting of the cathedral, and its physical and spiritual relationship with its dependent city and county.

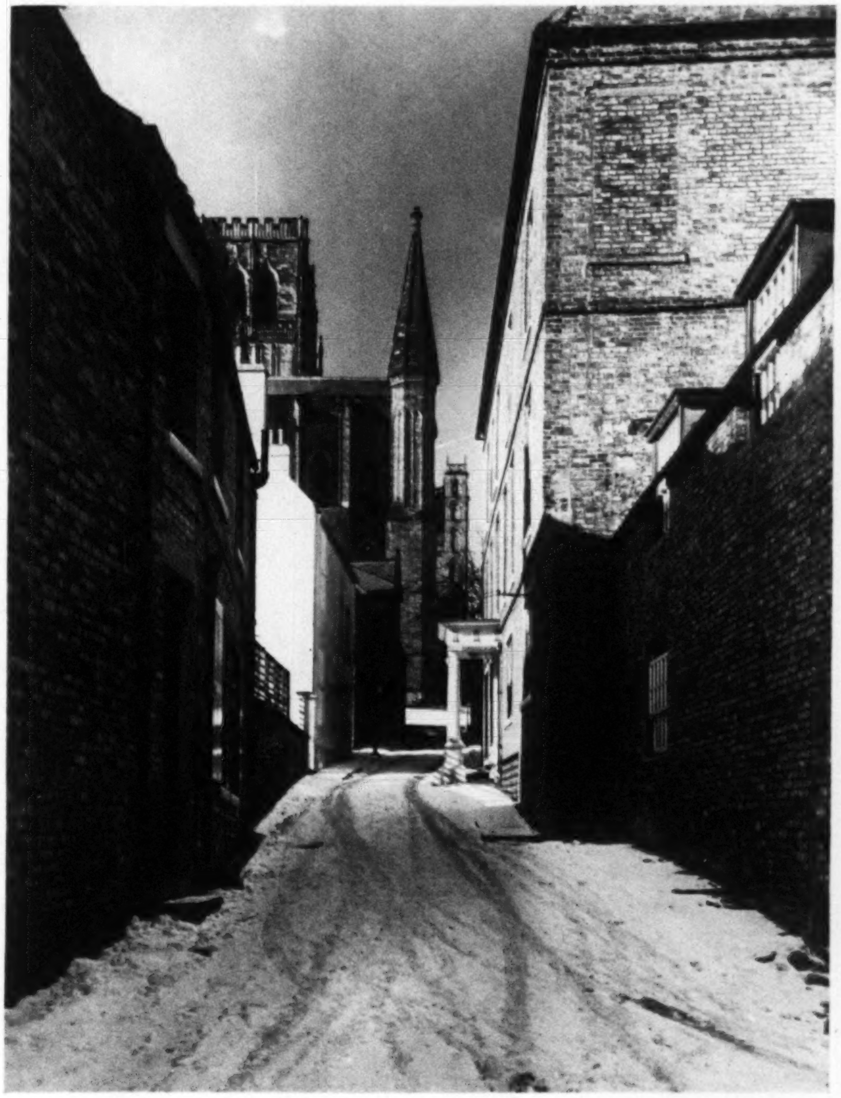
Durham is one of the great experiences of Europe: an experience that begins with the tremendous display of cathedral and castle that one sees from almost any direction as one approaches the city, continues through the sense of majesty given by the great buildings crowning the closely built streets of the medieval town, and culminates in the near perfection of their setting on the Rock itself.

[*continued on page* 403

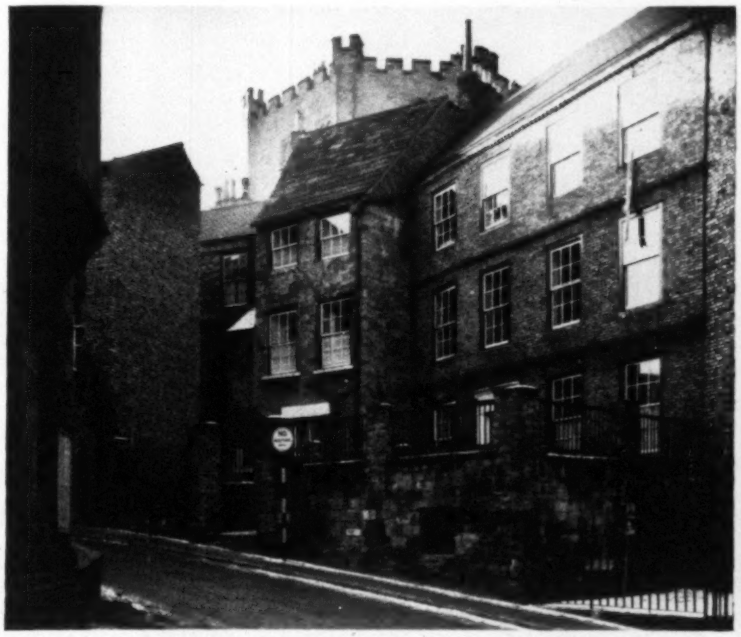
On the plan below of the central peninsula of Durham—the Rock—the numbers in red correspond to the photographs on the pages following. The hatched area is that threatened by the university.


Station
Hall
Framwelgate Bridge
Bridge Gate (Site of)
City Wall
The Castle
Chapel
Keep
Moat (Site of)
Castle Gate
THE UNIVERSITY
PALACE GREEN
St Cuthbert's Well
South African Memorial
Grave Yard
Galilee or Lady Chapel
THE CATHEDRAL
Cloisters
Chapter House
Cemetery
Fulling Mill (Disused)
Prior's Kitchen
College Gate
Corn Mill (Disused)
St Margaret's Church
St Mary's Church
Prebends' Bridge
Water Gate
New Market
A177
Elvet Bridge
North Gate (Site of)
Hatfield College
St Oswald's Church
OSSGATE
WARD
Appearance of present

DURHAM: A PROGRESS UP THE ROCK

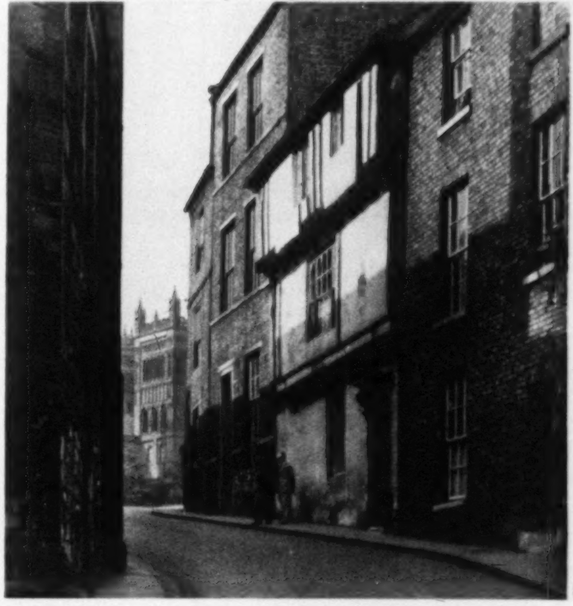


3 (*above*), *the cathedral from within the city: looking up Bow Lane to the east end.*



4, *the castle keep rising above the houses in Owengate.*

5 (*below*), *the western towers of the cathedral suddenly revealed as one turns the corner of Owengate.*



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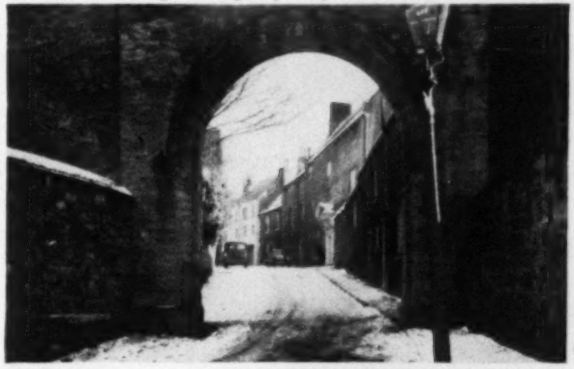
Below and overleaf (6-14), *the sequence of views disclosed as one moves along South and North Bailey, Durham's best street, which curves along the length of the peninsula.*



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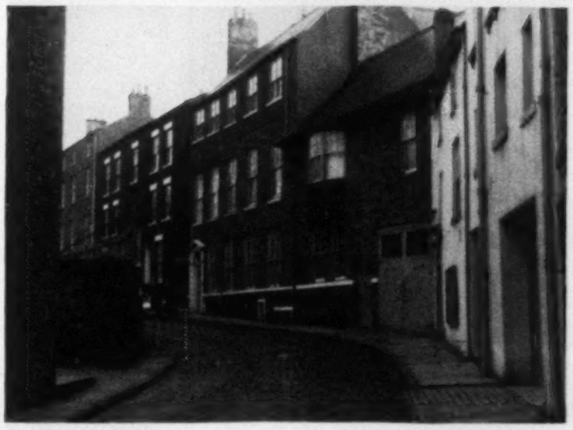

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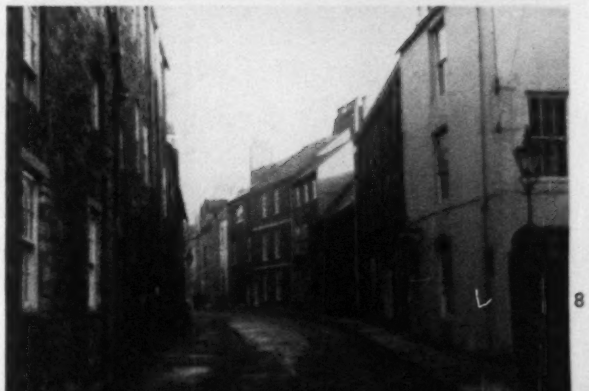

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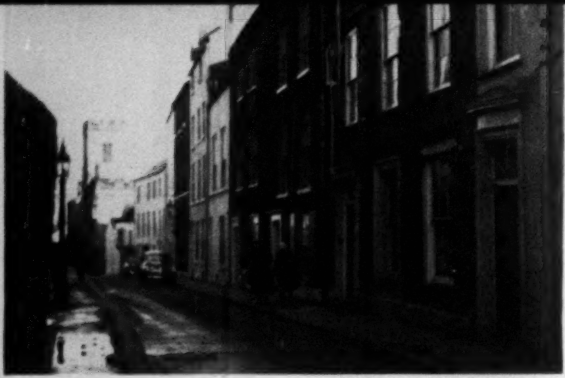

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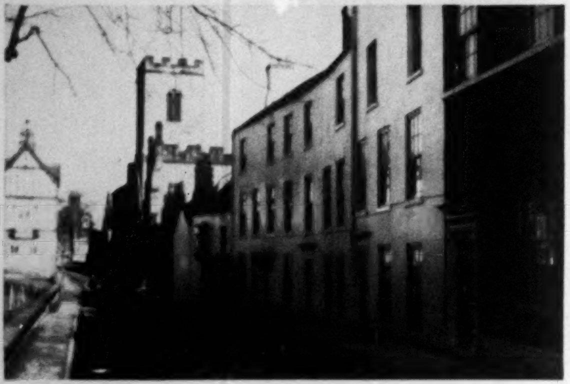

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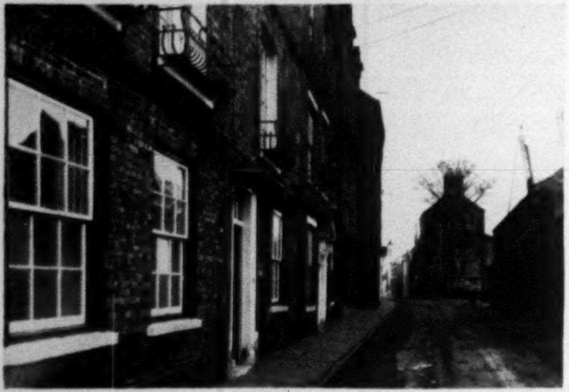

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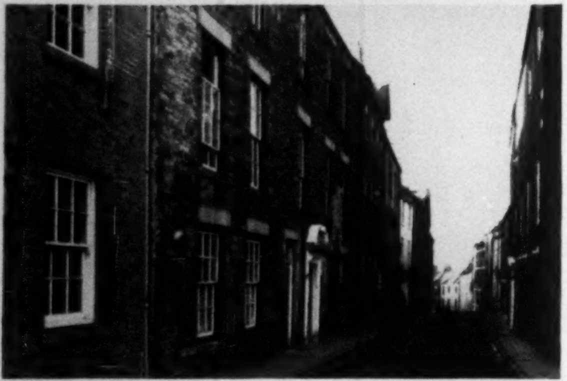

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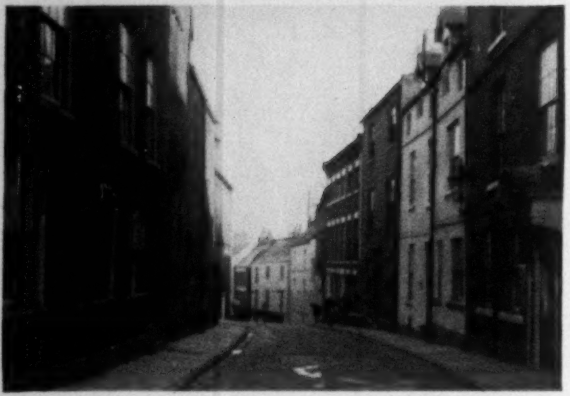
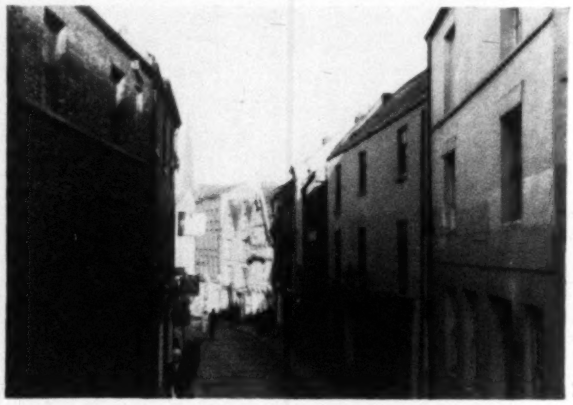


13

9-13 (left) and 14 (below): continuing the sequence of views obtained while moving along the Bailey. Whatever the variation in size of the houses, the scale, both in mass and detail, is always right. This is vernacular street architecture at its best.



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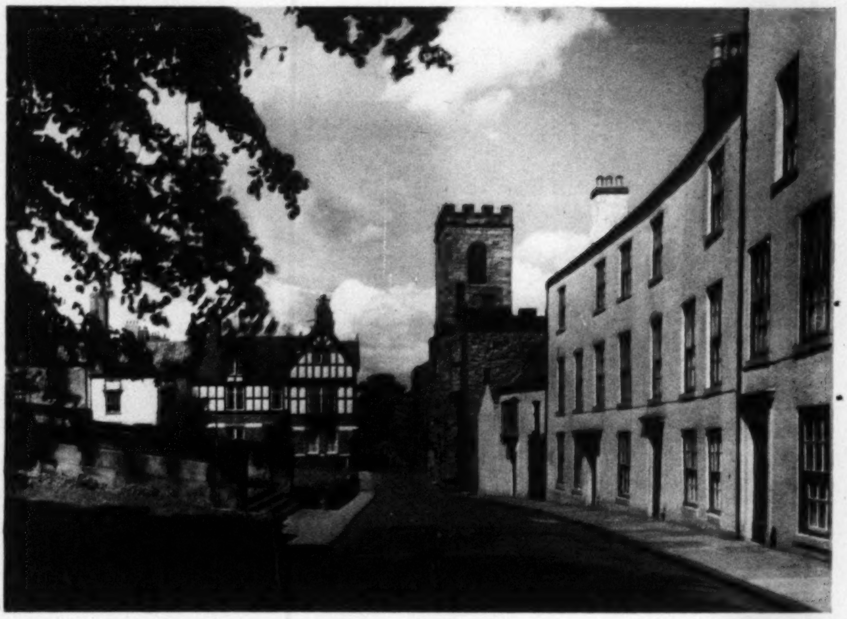
15, at the top of the Bailey: the little open space, of great value in the townscape, at the east end of the cathedral.



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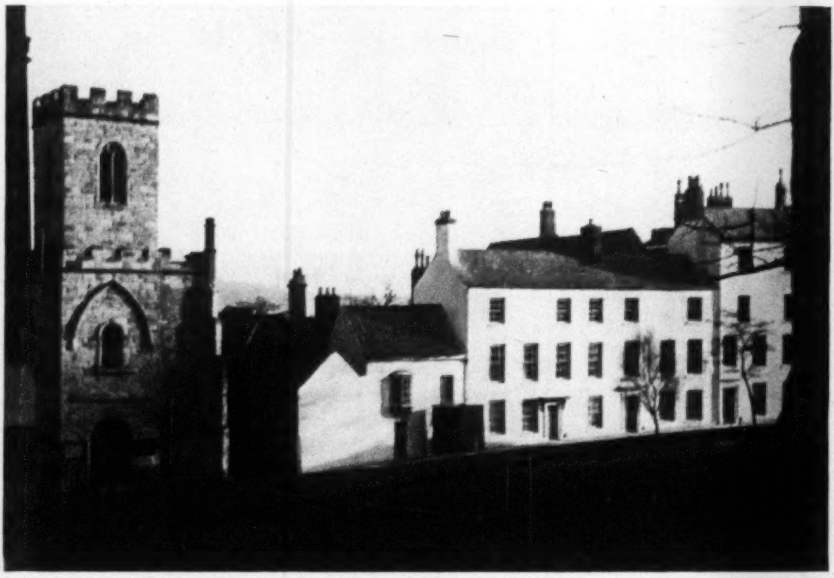
16, St. Mary-le-Bow and North Bailey seen from Dun Cow Lane.



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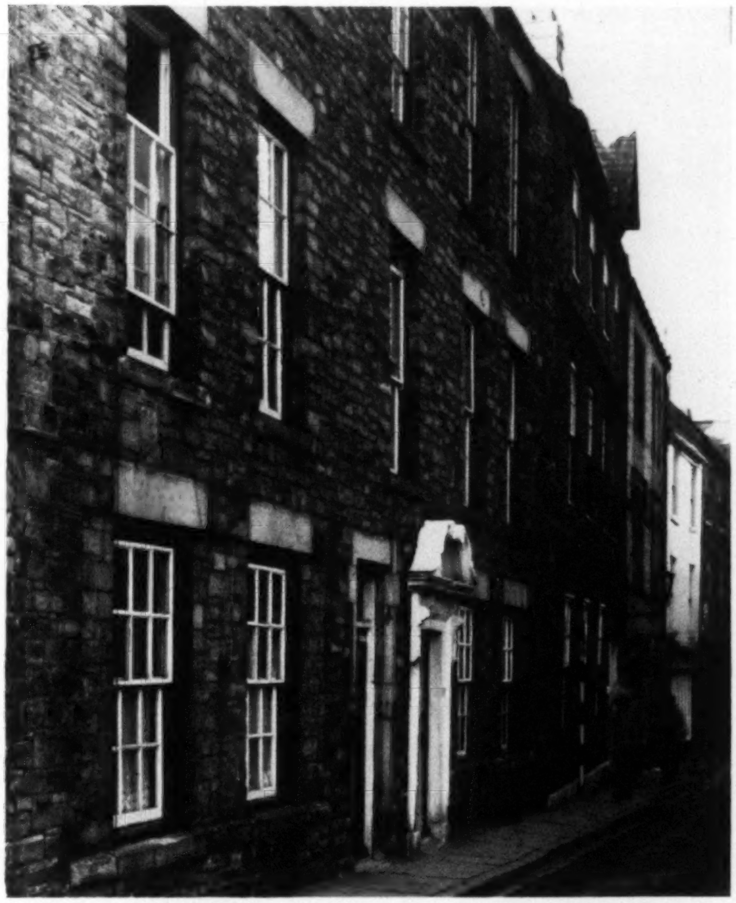
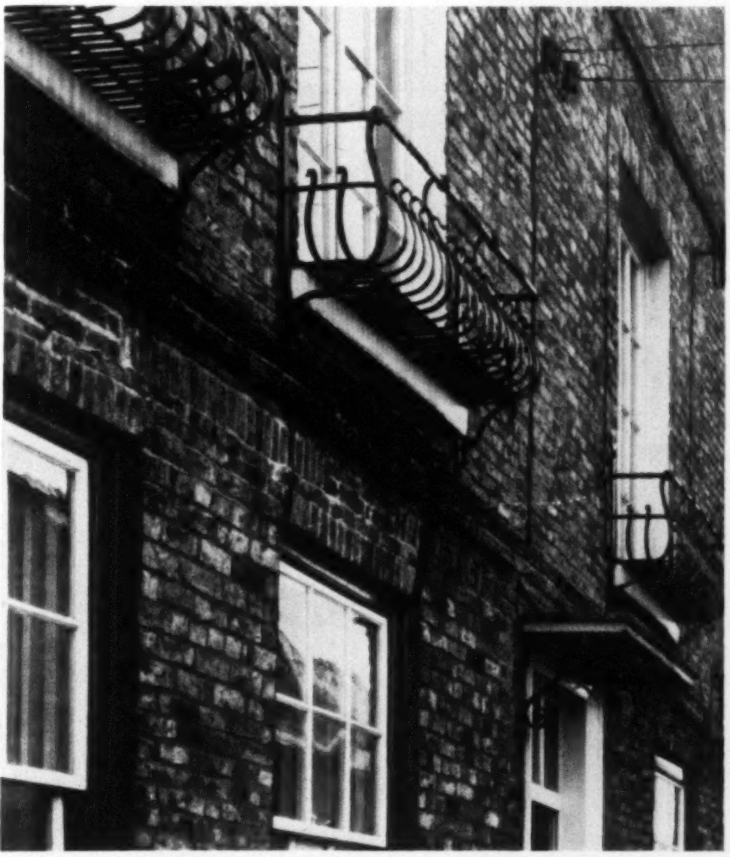


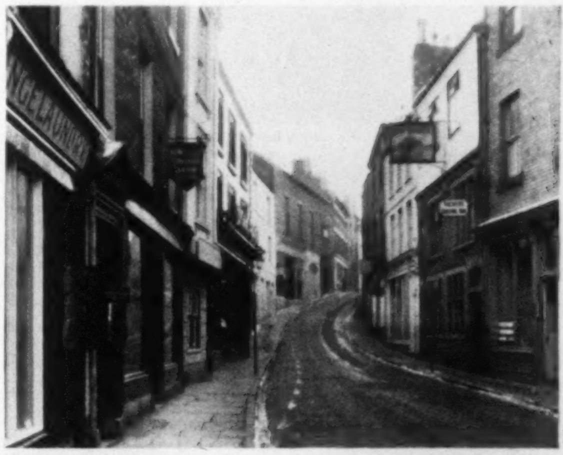
17, *close-up showing the high quality domestic architecture of North Bailey.*



18, *delicate detailing typical of Durham's eighteenth-century houses.*

DURHAM: A PROGRESS UP THE ROCK

below and overleaf (19-23)*: another sequence showing the views disclosed as one moves from Saddler Street to Palace Green.* 19, *Saddler Street looking south.* 20, *North Bailey from the corner of Owengate.* 21, *Owengate looking south-west.* 22, *the sudden appearance of the cathedral from Owengate.*



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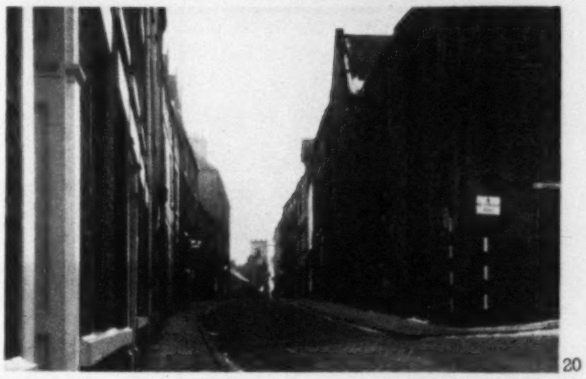

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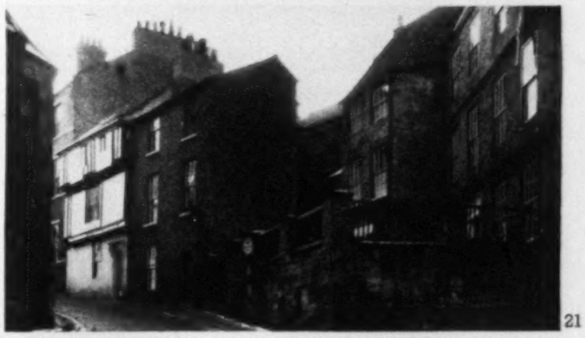

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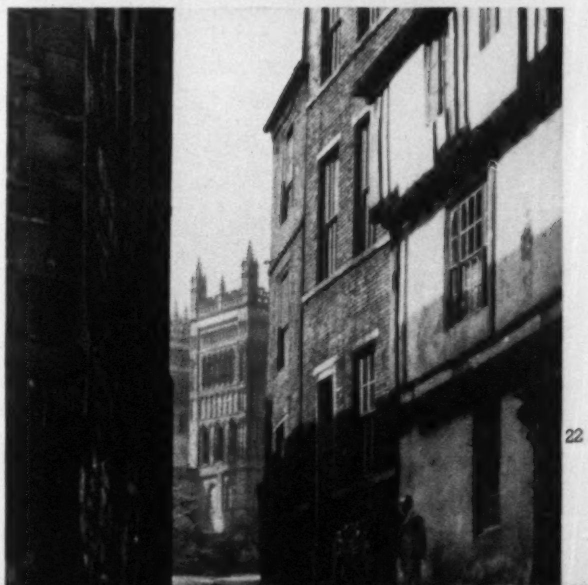

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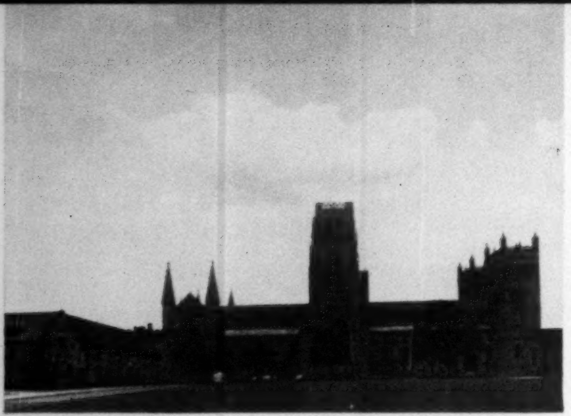
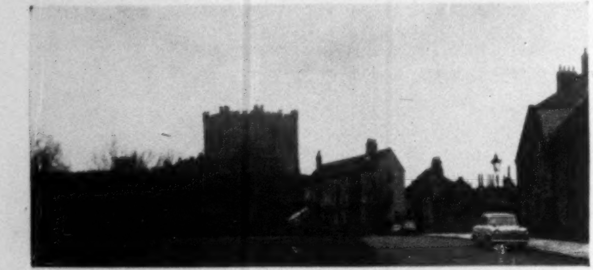
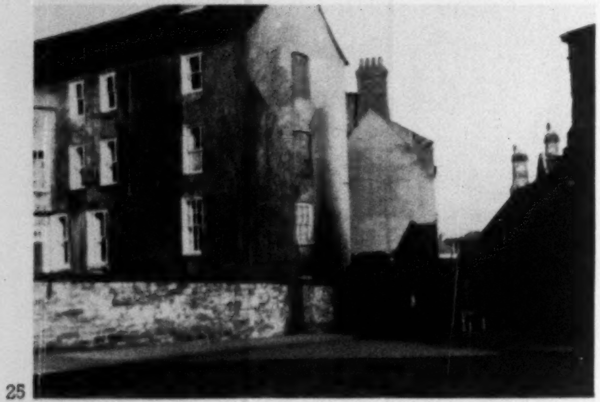


23, the final episode in the sequence of views (see previous page) obtained while climbing up to Palace Green: the explosion of space at the top, with the cathedral seen across the Green.



24, the Castle keep seen across Palace Green, looking north.

25



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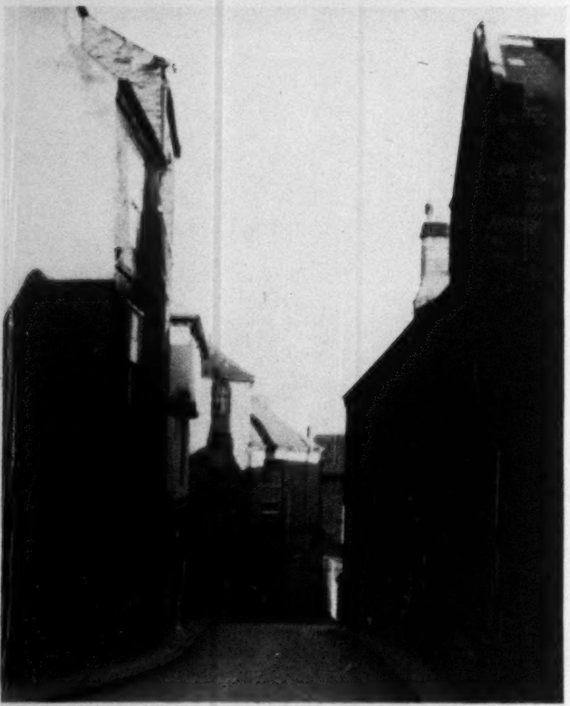
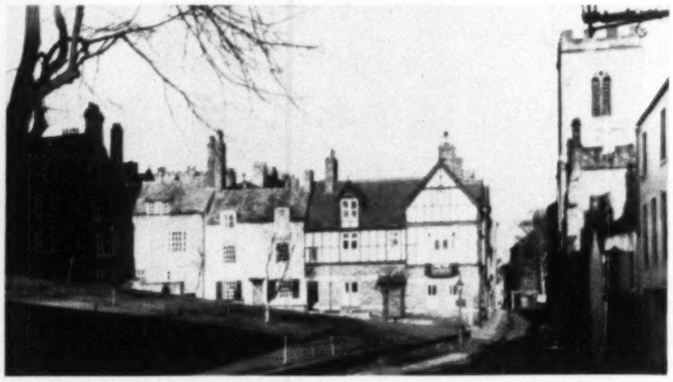
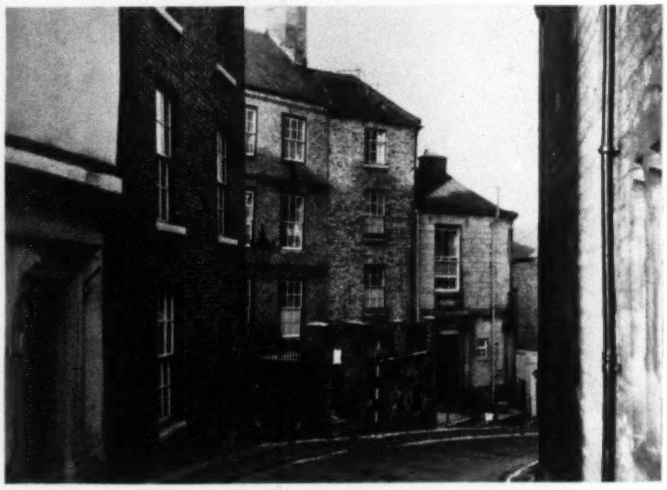


from the openness of the Green down again into Owengate: 25, the corner of the Green; 26, Owengate looking north-east.

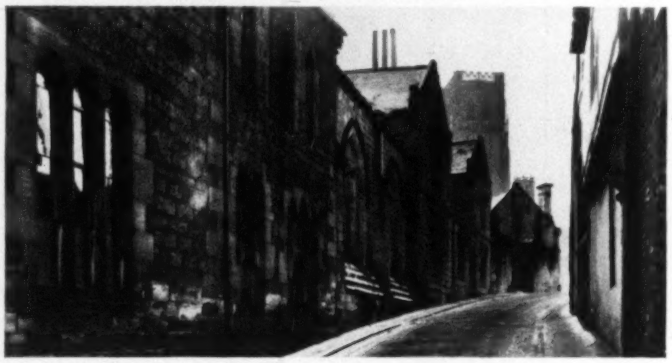
DURHAM: A PROGRESS UP THE ROCK



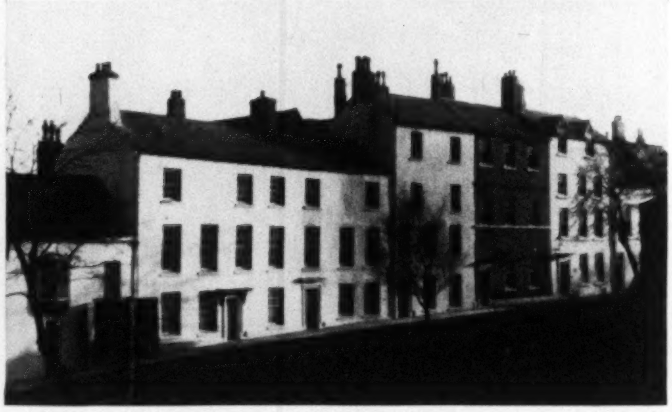
27, Dun Cow Lane from North Bailey. These are among the houses threatened by the University's building project.



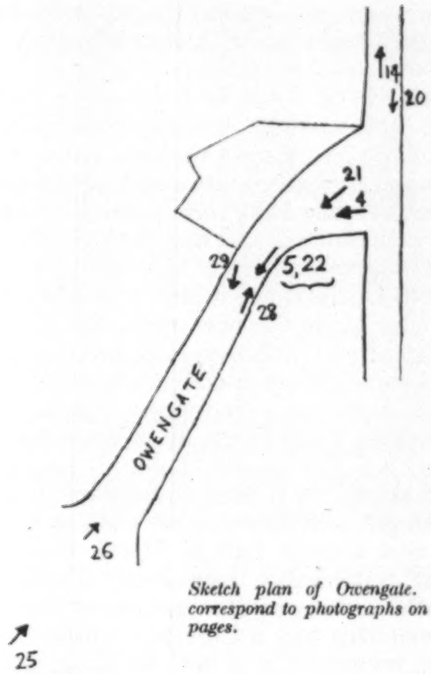
28, Owengate, in its informality the perfect foil to a monumental building.



29, the remarkable restraint of the Victorian buildings in Owengate.



30, houses in North Bailey that now form part of St. Chad's College.



Sketch plan of Owengate. The numbers correspond to photographs on the preceding pages.

continued from page 398]

The Rock is a narrow pear-shaped peninsula, almost surrounded by a horseshoe bend of the River Wear, 2. Its banks are precipitous and deeply wooded, but on the top is an almost flat plateau, and here stand the castle, the cathedral and monastery, the cathedral's domestic buildings, and all along the east side, the long curving street of houses, colleges and churches, marking the limit of the outer castle bailey and now called the North and South Bailey.

Even from a great distance the scale of the cathedral and castle makes a direct and unforgettable impact. Closer views reveal all the dramatic possibilities of the site: from the west the cathedral seems to rise sheer out of the forest; from the south-east, 1, it rides magnificently above a line of gabled backs, whose irregular seemliness makes a wonderful foil, informal and modest, to the great architectural force of the cathedral. Any larger or more formal building in the foreground, and the scene would be entirely ruined. Among the streets of the old city the sudden appearance of castle or cathedral above or among the small-scale vernacular is even more dramatic and exciting, revealing thrilling contrasts of scale which in no way disrupt the intimate harmony of the union, 3. And to look at a street like Owengate under the great mass of the castle keep, 4, or suddenly revealing the towers of the cathedral, 5, is to realize that these streets succeed so perfectly in their function as a foil precisely because they do not make pretensions to architecture themselves, leaving all the display and grandeur to the greater buildings and thus making the experience of them in their setting all the more impressive and telling. These streets seem to have just happened; but in the event no conscious design could improve on their unaffected simplicity.

The Bailey, the long narrow curving street running the length of the peninsula, is the best street in Durham and one of the best of its kind in England. Approaching from the south-west across Prebends' Bridge, where one is apparently in the depths of the country, one meets the street announcing itself directly with the plain eighteenth-century Water Gate, 6, immediately curving away to the north in a thoroughly urban way, 7. Then for the whole length of the peninsula there is virtually nothing to jar: always the scale, both in mass and in detail, is exactly right: the larger buildings do not overpower, nor the smaller ones seem trivial. It is the English vernacular street par excellence, where the designs of individual houses, varied though they are, are kept subservient to the needs of the street as a whole and the more important things that it serves.

Half-way along the character suddenly changes, 9: the narrowness of the street gives way to a sense of space, while with wonderful, if possibly unconscious, tact the three- and four-storey level drops to two, the drop in height beautifully showing off the little church of St. Mary-le-Bow, 10, and coinciding with the east end of the cathedral itself. This little open space, 15, is immensely important, and so is the design of the houses around it. Their quiet restraint not only allows the church to have a certain dignity of its own, 16, but is the perfect foil to the great Gothic display of the Nine Altars, giving an effect of grace which would be totally ruined by the intrusion of any large building. Only the incongruous Tudorism at the corner of Dun Cow Lane sets something of a jarring note: here a simpler building would certainly be an improvement, but even so, the scale is right and a great deal could be done simply by painting out the applied woodwork.

The northern part of the street has been to some extent spoiled by the gap in front of Hatfield College on the east side, though the retention of the high wall on the frontage still gives a valuable containment to the street. It remains a remarkable collection of eighteenth-century domestic architecture, 17, finished with the characteristically delicate detailing of Durham, 18—a group whose loss would be most serious. Finally, the street drops down into Saddler Street, 13, 14, and with a more bustling pattern of styles ushers in the business of the commercial city, a transition at once straightforward, simple and natural.

To walk along the Bailey is to experience directly the harmony which comes in a street of individually built houses, provided only that each has the benefit of a sense of tact in its designer, a sense of its place in relation to the whole. But much more astonishing is the approach to the cathedral from the north. Saddler Street, the only public road on to the peninsula, climbs steeply, 19, and then divides, 20. The narrow little street to the right is Owengate, still steep but now curving mysteriously. At first the view is completely closed, 21, but then the curve turns the other way, giving a sudden glimpse of the western towers of the cathedral, 22. Still the view is confined until, at the top of the rise, there is an explosion of space into the great flat expanse of Palace Green, with the whole length of the cathedral now displayed, 23. For all the variation in style and height of the buildings, the effect is anything but casual. Note, for example, how the tall house beyond the half-timbered one needs its height to act as a firm 'hold' to the view of the towers. The narrow curve of the gateway street is the perfect lead-in to the glorious architecture on Palace Green. The effect is both subtle and profound, a sense that all the buildings belong together in a most intimate union, an effect of civilization and order achieved not imposed. It depends entirely on the relation of buildings to spaces and of different kinds of space to one another. (These relations remain important as one moves in the opposite direction from the openness of the Green, 24, down into Owengate, 25, 26.)

This is the heart of Durham as it is now, and there is no more exciting or moving piece of town design anywhere in the country. It is against this that the university's intentions must be judged. The proposal is to demolish the north-west side of Owengate (perhaps leaving the somewhat uncharacteristic half-timbered house), and to replace it with new buildings containing sets of students' rooms. Later the whole of the west side of North Bailey, as far south as the Cathedral, and including the vitally important Dun Cow Lane, 27, is also to go and the site to be redeveloped in a similar way.

The result will be to wreck for good the subtle relation between the great formal buildings and the informal houses in the streets that lead to them and act as their foil and grounding. For any new buildings on this scale will be bound to create a new *formal* element in the scene; and so the dramatic impact of cathedral and castle will be tragically lessened. It is a real, and an essential, merit of these small buildings that their architectural qualities are humble and restrained ones. In no way do they compete; they prepare. Owengate as it is in its almost jumbly state, 28, is the kind of perfect foil which no large building could possibly be. In fact the arrival of more *architecture* on the Rock would be as fatal as the arrival of more fake architecture (of which there are one or two examples already). No architect could honestly, genuinely, produce the harmony of contrast which exists already: the motley that Durham has is the most astonishing stroke of good fortune and of the tact of earlier builders: it cannot be planned for.*

Moreover, though the Rock has been the centre of the university for over a hundred years and must naturally remain so, there is very little room there for any further expansion: the bulk of new buildings *must* go outside it, simply because the peninsula is so small and so largely taken up with the cathedral, the castle and other colleges there already. Obviously the university wants as little dispersal as possible; but some is inevitable, a fact which has been recognized in the building of the St. Mary's College, Grey College and the new science departments south of the river. Since the amount of space that can be made by the present proposals is so limited, and the amount of harm which will result so great, surely it is best to let well alone. Distances in Durham are in any case very small; and there are sites along the new inner city road and elsewhere which urgently need to be redeveloped and could suitably become college quarters where there is plenty of space to house new buildings without cramping.

Nevertheless, there seems no reason why the existing houses on the Rock shouldn't themselves be *adapted* as rooms for a limited number of students. A very few might well be replaced, such as the architecturally weird concert hall in North Bailey and the gloomy, if remarkably restrained, Victorian-board-school-Gothic offices at the bottom of Owengate, 29, though even this has a humility which it would be difficult to recapture in a new building. For the rest they surely can and ought to be restored (if they are in bad condition the fault lies with the university, which has owned them for years); conversion should not be an impossible task, and it is certainly one which should be put in hand rather than the university's present proposals. The example is only a few yards away, for in the North Bailey itself, some similarly threatened houses have been and are now being turned into college rooms. They are the excellent row opposite the east end of the cathedral, 30, which have, without too much difficulty, become an integral part of St. Chad's College, which, while a part of the university, is in some respects autonomous. Perhaps even more to the point are the restorations recently completed in Magdalene Street, Cambridge, by David Roberts (see AR, June 1959). Here internal courts were cleared of clutter and made into common gardens (as could suitably be done behind the houses in North Bailey), and another fine row of vernacular buildings converted into very attractive students' rooms. This is the proper answer for the Durham houses as well.

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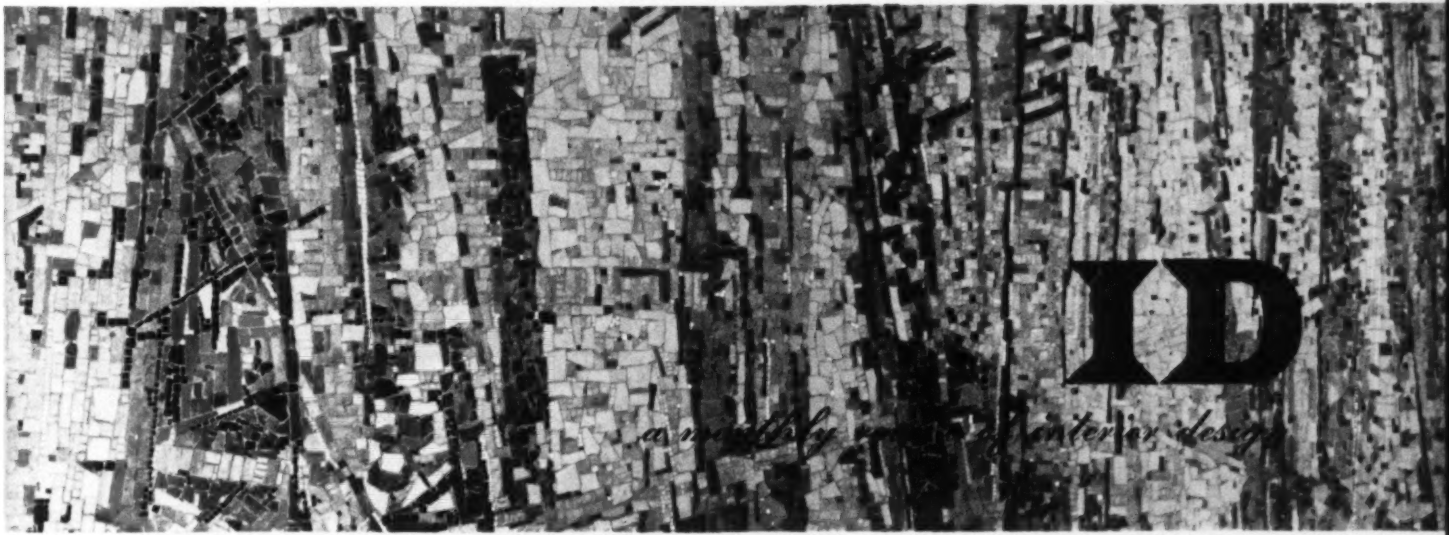
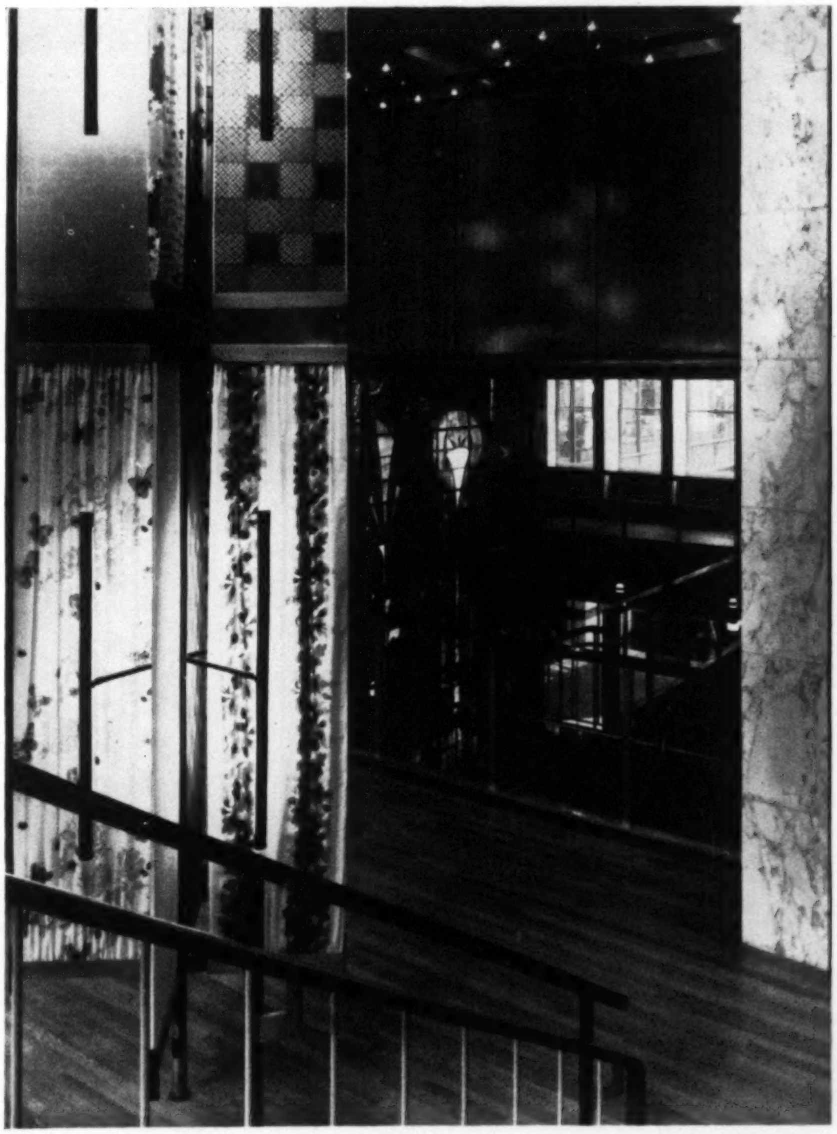
*Except conceivably by commissioning a different architect to design each separate small unit, a procedure which would no doubt hardly commend itself to the university, and would, as the contriving of something 'uncontrived', be only too liable to result in a bogus romanticism.


ID
a monthly review of interior design

1

Wallpaper and Fabric Showrooms, London, W.1

architects: Slater and Uren (assistant, and interior co-ordinator: Geoffrey Holroyd).
interior designers: Beverley Pick Associates.



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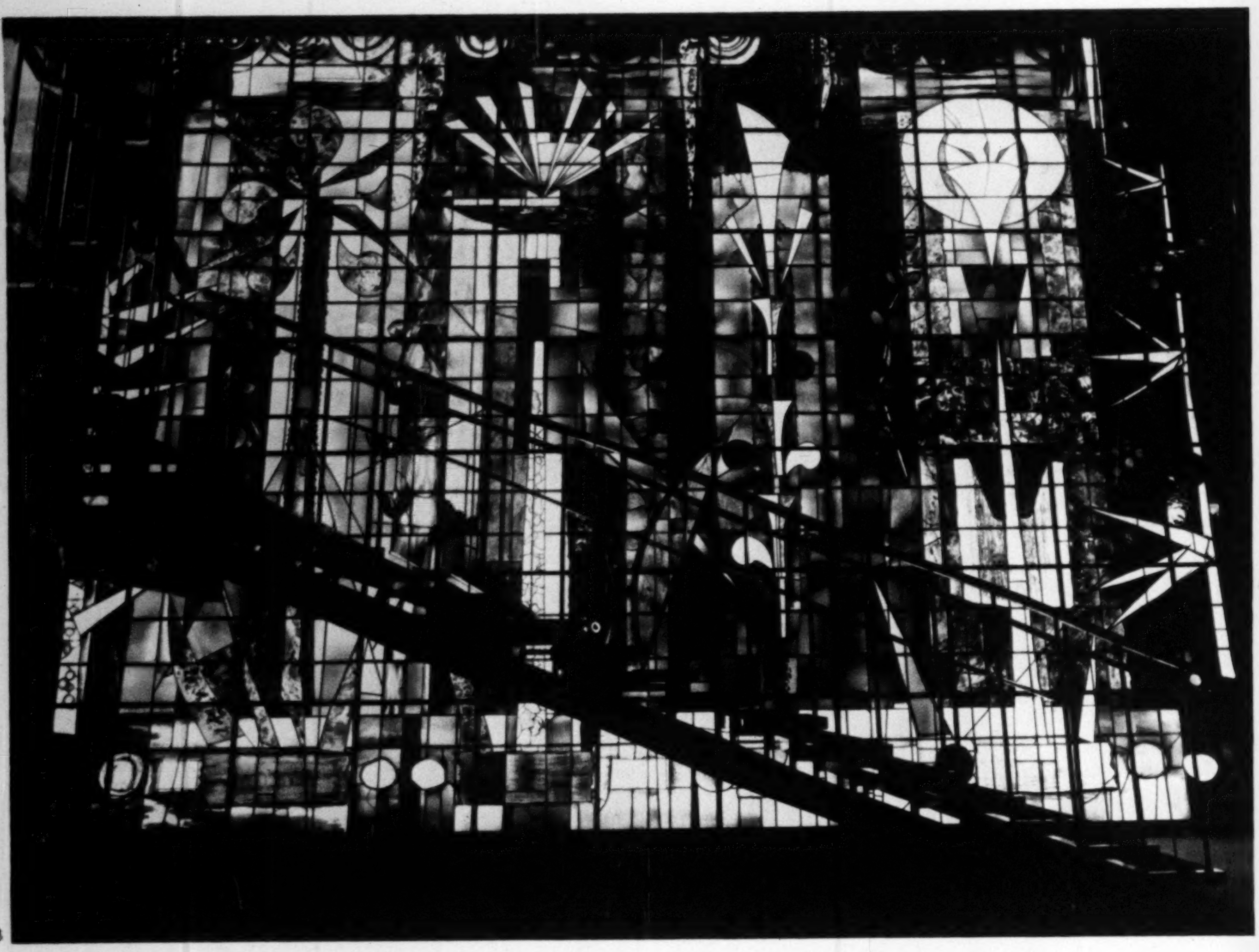
The Sanderson Building in Berners Street, W.1, which is further described and illustrated on pp. 420-421, is primarily devoted to the sale and display of wallpapers and furnishing fabrics. Architects and interior designers alike had, therefore, to envisage a building in which numerous strongly patterned surfaces (the samples of the products on display) would compete with one another, and with the architecture of the structure itself. One solution might have been to create a design whose architectural elements were strong enough to master this competition (a very tough assignment), another might have been the creation of an architectural background of complete neutrality. The final solution tends toward the latter decision, with the important proviso that the visitor coming into the building is prepared for the visual richness within by some powerfully decorated surfaces in the entrance area, and is saved from being overwhelmed when he is inside the display areas by vertical and other spatial penetrations on a scale unique in recent British commercial architecture.

1, a close-up section of the glass and marble mosaic by Jupp Dernbach Mayen on the wall which wraps round from the central court into the outer lobby of the main entrance (see page 421) and flanks the entering visitor with a zone of visual sparkle.

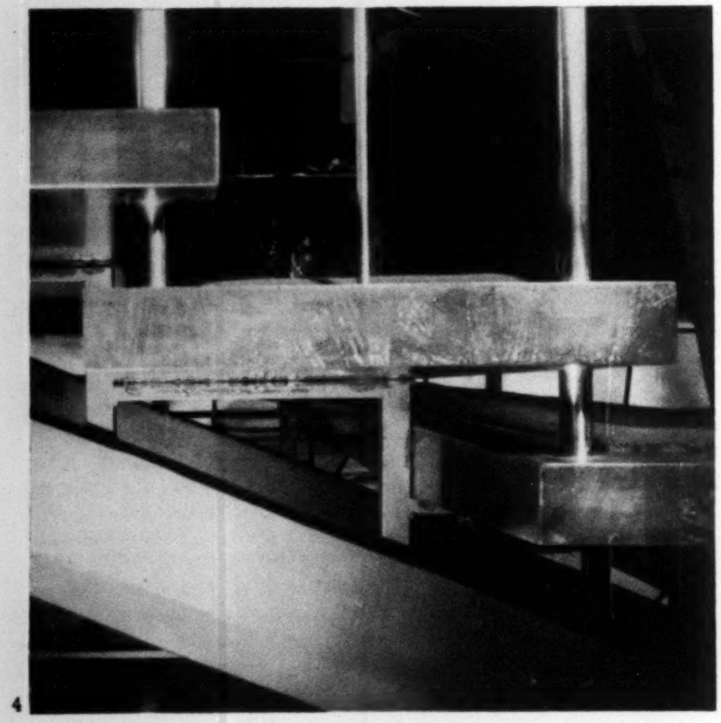
2, view from the stairs of the second-floor display area, down towards the entrance stair-well with the garden court beyond the far windows (the



3

sculptures in the pool may just be distinguished to the right). This view gives some idea of the scale of the staggered, two-stage vertical penetration from entrance-space to display-space, and the size of John Piper's stained glass 'window'.

3, a general view of the stained glass window behind the entrance stair, executed to John Piper's design by



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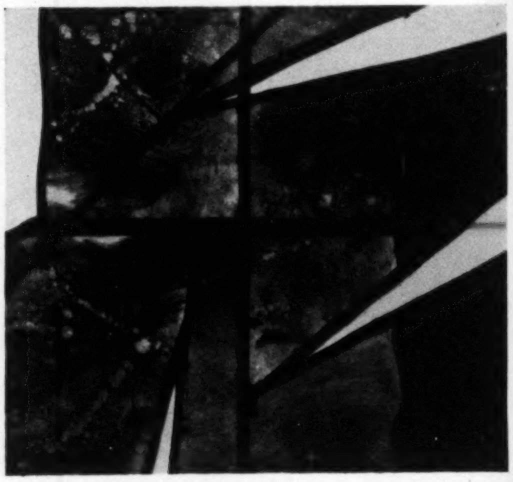

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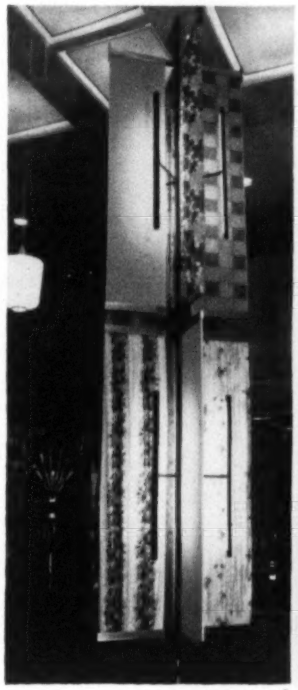

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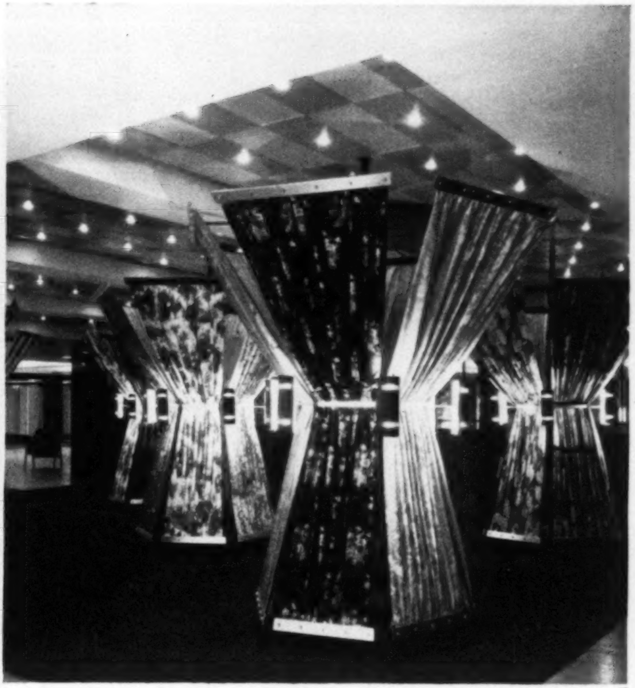
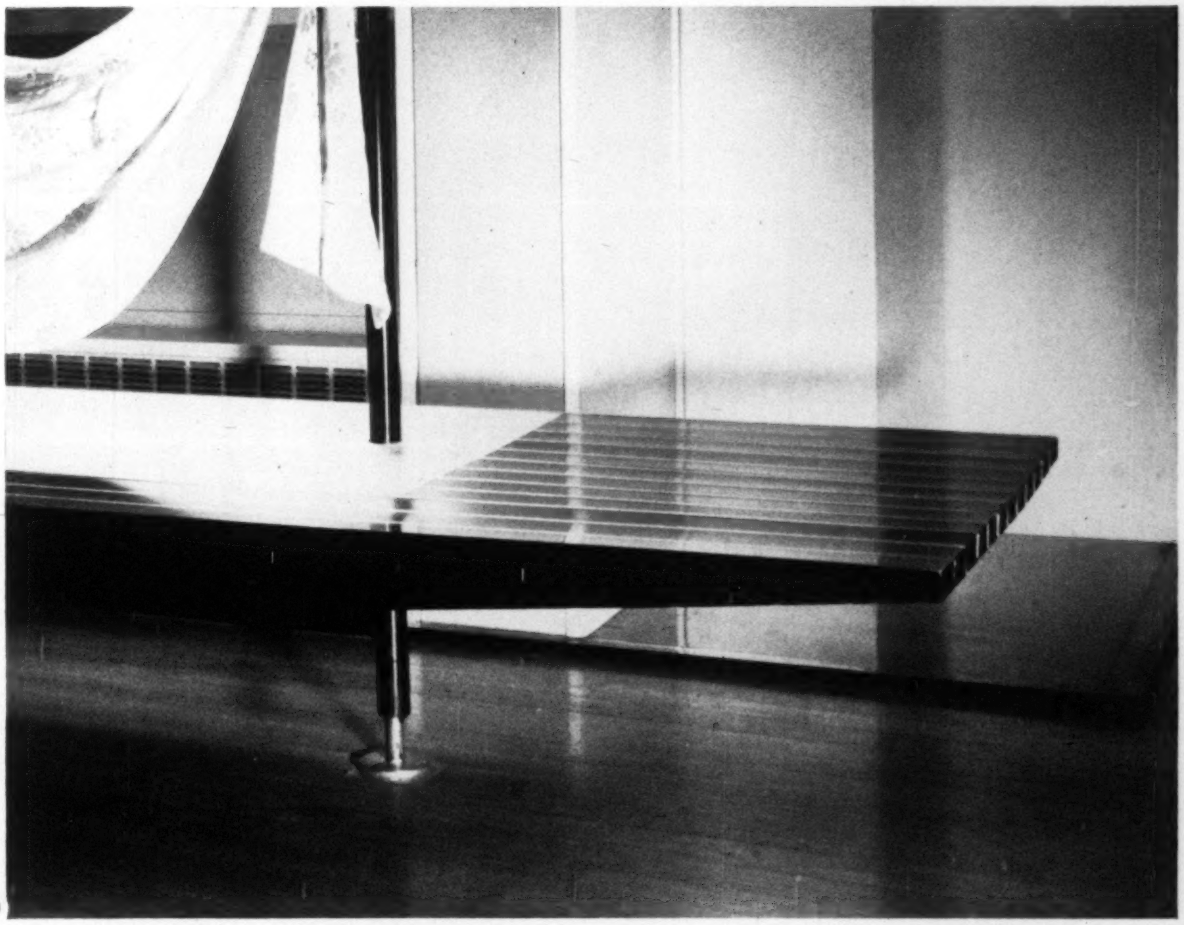


7

8

Patrick Reyntiens—a detail giving a sample of the different qualities of transparency is seen in 5.
4, the intricate fabricated substructure of the main staircase—as will be seen, the hardwood treads are sufficiently highly polished on all sides for their lower faces to reflect the Cardinal Red of the stair carpet.
6, screens for displaying wallpaper and fabrics in the first-floor, two-storey display area.
7, alternative method of display used in areas with normal ceiling-heights.
8, display frame for showing draped fabrics against panels of wallpaper.
9, a detail of this frame, showing its 'floor' of hardwood slats, part-covered with grey plastic, black satin-



9

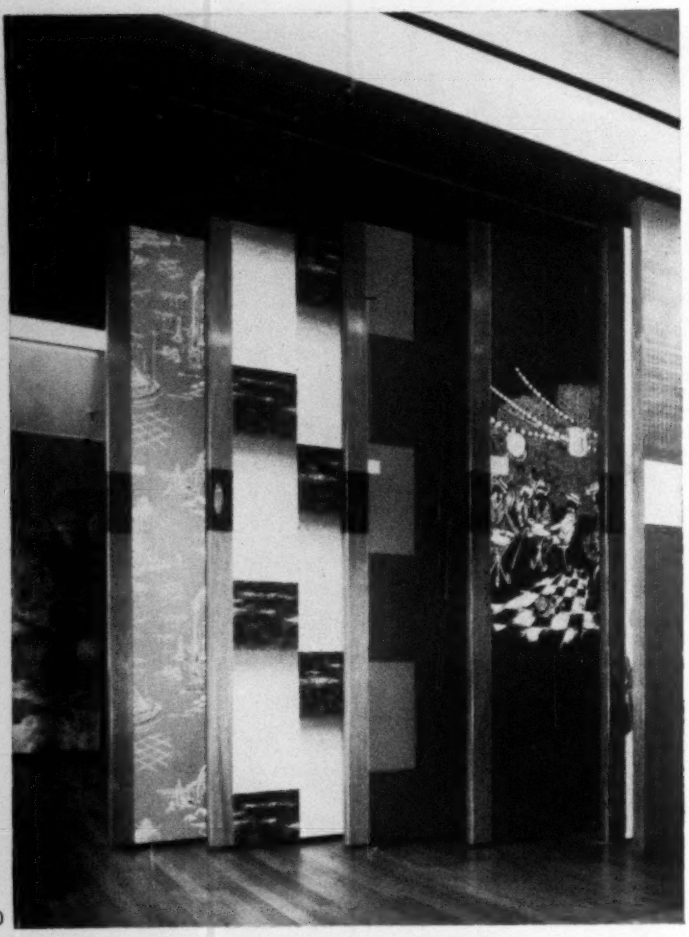
finish tubular uprights and brass feet. Three of these stands are used in the second-floor display area, carry their own spot-lighting and can be moved if necessary.

10, sliding screens on overhead runners, for displaying wallpapers with large-scale patterns that cannot be appreciated in the normal sized sample—the two abstract designs seen here are by Le Corbusier.

11, 12, general views of display and reception areas on upper floors, showing overall illumination of general display areas, and more varied lighting in special areas.

13, double-height display area, with high-level bridge, in that part of the building which spans across behind the garden court (visible in the background of illustration 9, p. 421).

14, view into the entrance hall from the outer lobby. Although the glass



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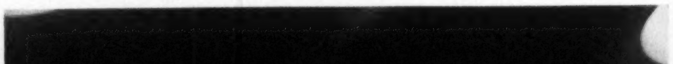


11,12

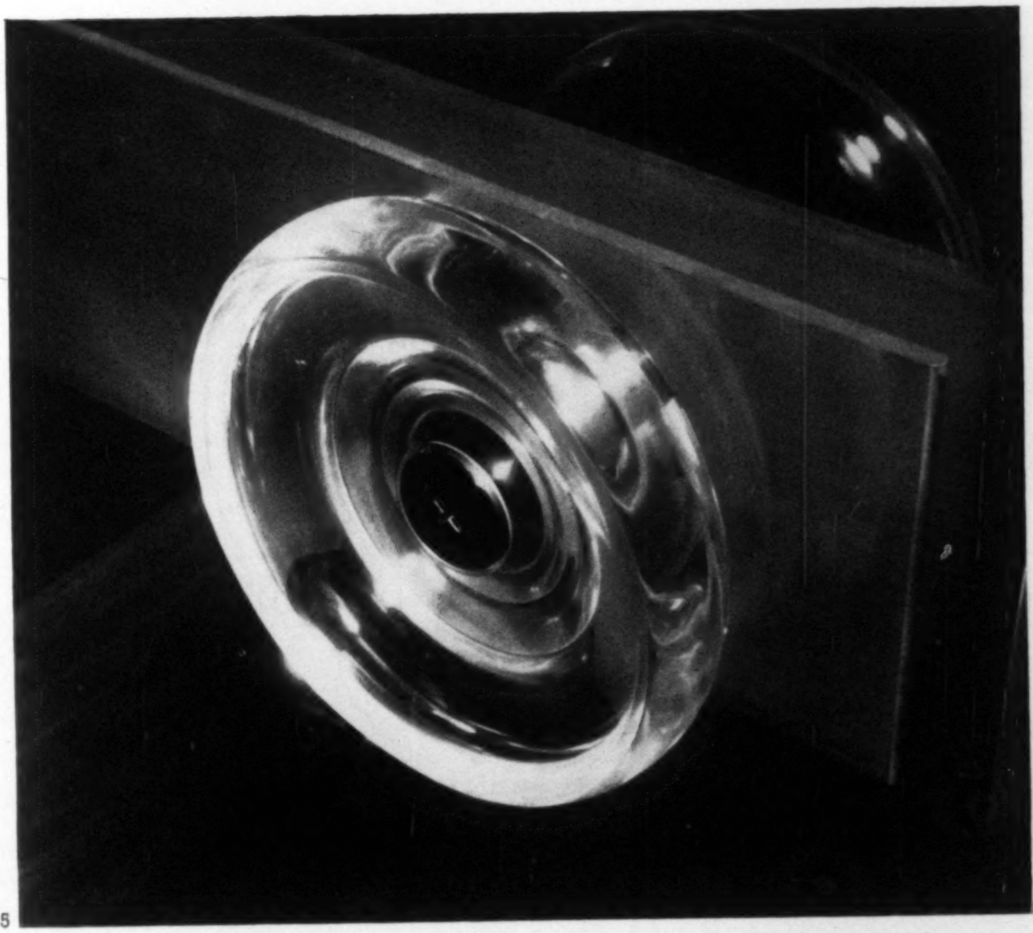
13

14

panel above the doors makes the two spaces visually continuous, the outer lobby is physically separate from the interior and acts as an airlock to prevent the dissipation of too much interior heat.

15, turned clear plastic doorknob on the main entrance doors—a wooden version of the same shape is used on staff entrances, etc., elsewhere in the building.

Showrooms in London, W.1



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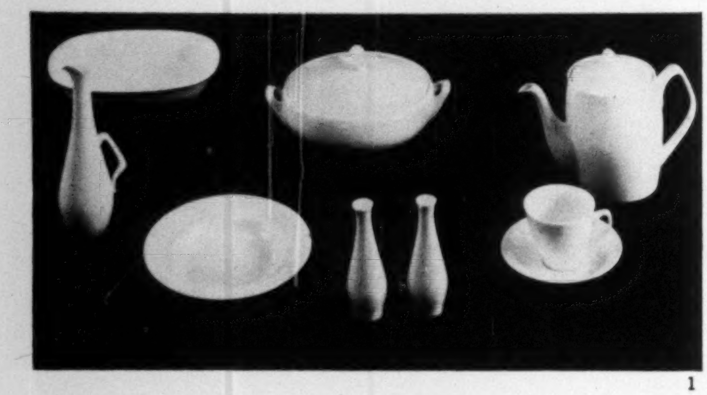
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design centre awards 1960

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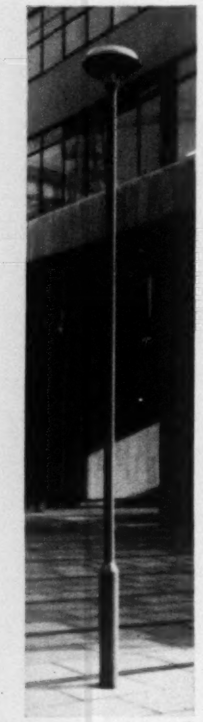
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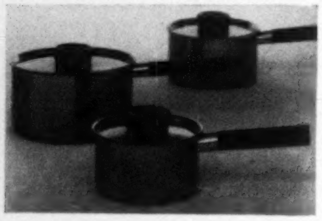
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DR

design review

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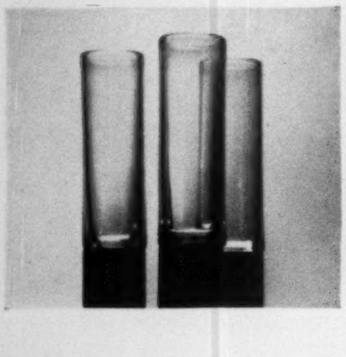

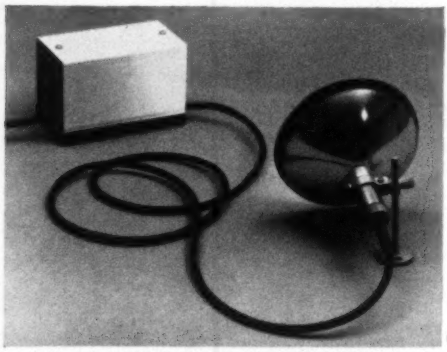
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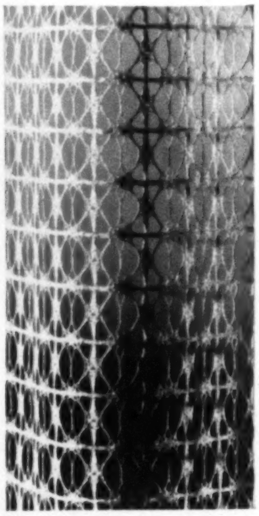
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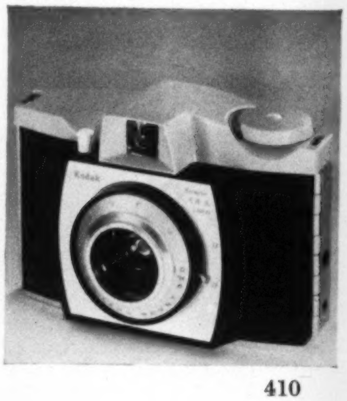


9, *finally, this* Brownie 44A *camera (Kodak; Kenneth Grange, consultant) raises some of the embarrassments about æsthetics-versus-function that were stirred up by last year's awards. The Awards Panel praise this instrument, justifiably, for its looks, and ease of handling, but say nothing about the prime functional consideration in a camera—its photographic performance. Although this particular version of the Brownie was not included in the Consumers' Association survey of cheap cameras (*Which, *May, 1959) the earlier members of the Brownie range tested then were unimpressive performers. If the 44A were remarkably better in optical performance, the point would have been worth mentioning, because this would have been an unusually good camera for its price range; if it is not appreciably better, then it seems difficult to justify its award.*

Derek Barton

NEW LAMPS IN OLD STREETS

CHELSEA'S 15-FT. 'SPECTRES' AND THE PROBLEMS THEY ILLUSTRATE

The lamp-post in the residential street is perhaps the object that brings the problems of industrial design most closely home to the ordinary man. Many boroughs, for one reason or another—most of them good—are at present engaged in replacing old lamp-posts with new, and far too often the result is an affront to the eye; it is also an affront in another sense to those who have to live with the new lamp-posts because they are seldom informed or consulted about them.

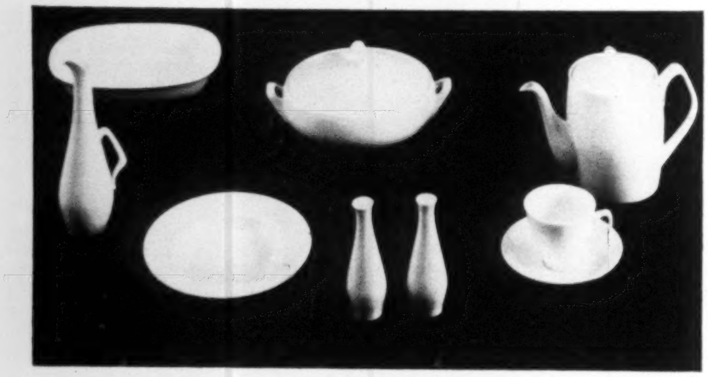
The author of the article below, in discussing this problem, draws attention to the bad relations that can ensue between residents on the one hand and officials and councillors on the other when new lamp-posts of poor design are simply imposed on a locality. He takes as an example the borough of Chelsea, where the process of replacing the lamp-posts in the residential side-streets is now going forward, with unfortunate results visually owing to the poor design chosen, to the widespread discontent of residents—and indeed of many others, witness recent questions about Chelsea's lamp-posts in Parliament, where the new ones were described as 'spectres.'

What is being done to Chelsea is of more than parochial interest, not only because it aptly illustrates a general threat to good design, but because the residential side-streets of Chelsea have a unity and charm that is a national loss if they suffer damage. The damage to these Chelsea streets is the more bewildering and to be regretted because the borough council have already relighted the main streets with new lamp-posts which—if not ideal—are of a far better standard of design than those now being installed in the side-streets.

Street lighting is a subject which has often of recent years, especially in cities and most of all in London, produced almost as much heat as light. Its provision is a local government function paid for out of the rates, vested in the Highways Committee on the technical advice of the borough engineer, who may have as much as half his salary paid by the Ministry of Transport in respect of his road duties. But the loan sanction for a lighting scheme is granted by the Ministry of Housing and Local Government, and as the Town and Country Planning Development Order, 1950, exempted lamp-posts from planning control along with other street furniture, there is obviously plenty of room for trouble, especially in boroughs where the engineer and surveyor likes things his own way.

Most of the controversies in London have so far been centred on the lighting of the 'A' (that is, the main) traffic routes. Here the most vocal party is the driver of car, bus or lorry, who reasonably dislikes the abrupt changes from orange to blue, yellow or white lighting which he may have to adjust himself to in the course of a short drive. He is more concerned with the quality and angle of the lights than the appearance of the lamps and standards. But now many London boroughs have re-equipped their 'A' roads and are turning their attention to the 'B' roads or residential side-streets. Here the unhappy choices of some councils have focused residents' attention for the first time on what street furniture looks like, and there is already plenty of evidence that borough councils in general have barely woken up to the nature of the problem that faces them.

Let us first sympathize with a con-



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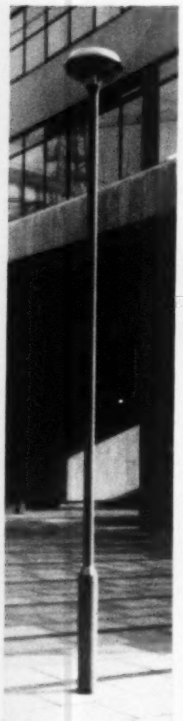

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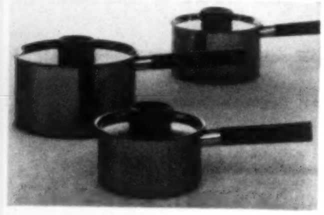

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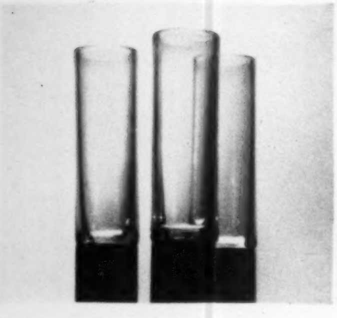

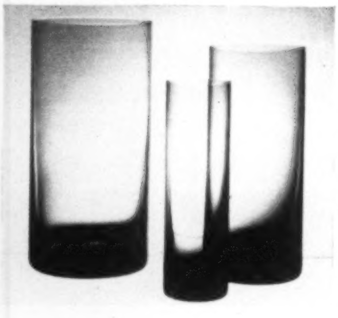

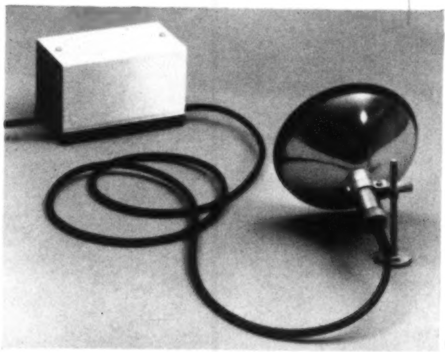

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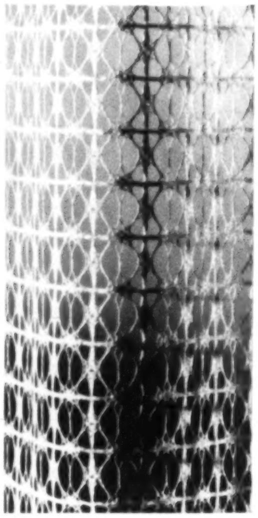

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NEW LAMPS IN OLD STREETS

CHELSEA'S 15-FT. 'SPECTRES' AND THE PROBLEMS THEY ILLUSTRATE

The lamp-post in the residential street is perhaps the object that brings the problems of industrial design most closely home to the ordinary man. Many boroughs, for one reason or another—most of them good—are at present engaged in replacing old lamp-posts with new, and far too often the result is an affront to the eye; it is also an affront in another sense to those who have to live with the new lamp-posts because they are seldom informed or consulted about them.

The author of the article below, in discussing this problem, draws attention to the bad relations that can ensue between residents on the one hand and officials and councillors on the other when new lamp-posts of poor design are simply imposed on a locality. He takes as an example the borough of Chelsea, where the process of replacing the lamp-posts in the residential side-streets is now going forward, with unfortunate results visually owing to the poor design chosen, to the widespread discontent of residents—and indeed of many others, witness recent questions about Chelsea's lamp-posts in Parliament, where the new ones were described as 'spectres.'

What is being done to Chelsea is of more than parochial interest, not only because it aptly illustrates a general threat to good design, but because the residential side-streets of Chelsea have a unity and charm that is a national loss if they suffer damage. The damage to these Chelsea streets is the more bewildering and to be regretted because the borough council have already relighted the main streets with new lamp-posts which—if not ideal—are of a far better standard of design than those now being installed in the side-streets.

Street lighting is a subject which has often of recent years, especially in cities and most of all in London, produced almost as much heat as light. Its provision is a local government function paid for out of the rates, vested in the Highways Committee on the technical advice of the borough engineer, who may have as much as half his salary paid by the Ministry of Transport in respect of his road duties. But the loan sanction for a lighting scheme is granted by the Ministry of Housing and Local Government, and as the Town and Country Planning Development Order, 1950, exempted lamp-posts from planning control along with other street furniture, there is obviously plenty of room for trouble, especially in boroughs where the engineer and surveyor likes things his own way.

Most of the controversies in London have so far been centred on the lighting of the 'A' (that is, the main) traffic routes. Here the most vocal party is the driver of car, bus or lorry, who reasonably dislikes the abrupt changes from orange to blue, yellow or white lighting which he may have to adjust himself to in the course of a short drive. He is more concerned with the quality and angle of the lights than the appearance of the lamps and standards. But now many London boroughs have re-equipped their 'A' roads and are turning their attention to the 'B' roads or residential side-streets. Here the unhappy choices of some councils have focused residents' attention for the first time on what street furniture looks like, and there is already plenty of evidence that borough councils in general have barely woken up to the nature of the problem that faces them.

Let us first sympathize with a con-

scientious metropolitan borough council about to fulfil its statutory duty of relighting its 'B' streets according to modern standards: any large lighting scheme is a long, arduous and expensive business. The council will almost certainly have to select (or commission) designs in keeping with every variant and mixture of architecture from the most florid six-storey Victorian to the plainest two-storey eighteenth and twentieth century terraces. The police want the side-streets brightly lit for the easier detection of burglary and brothels. Commercial interests plump for 'an air of brightness and commercial well-being' in central London, to quote from the draft practice notes of the Metropolitan Boroughs Joint Standing Committee (standardization of street lighting). The British Standards Institution recommend, in para. 302 of their code of practice for lighting 'B' roads, a mounting height of 15 feet; this makes it less likely for lamps to be damaged by high removal vans and fire engines, but it also ensures that without proper screening they will glare intolerably into the first-floor bedrooms of houses in narrow streets. However, the recommendation also allows tolerances of plus one and minus two—the latter only to be used when special circumstances render a 15-foot mounting height impracticable. Ratepayers on the other hand, when not in their cars, often prefer their side-streets discreetly, romantically lit by old-fashioned gas-lamps which enhance the charm and thus the value of their property.

Finally, the council will be confronted by the alternatives of gas and electricity, of tungsten, sodium, fluorescent or mercury vapour, and by a large choice of commercial street lamp designs in concrete, steel and aluminium, some of them on the approved COID list and some not, and with a price range of under £30 a piece to over £100. And they will (or should) know that most designs and equipment are liable to be improved or superseded while the scheme is being carried through.

There are, therefore, three main considerations of cost, efficiency and aesthetics which, of course, interact on each other. Unless the rates go up spectacularly or the lamps don't give light, the council will probably get by on the first two without much difficulty. It is on the 'amenity issue' that the trouble arises, as many of us are already aware from reading our daily papers. Residents not only pay the rates and elect the councillors, they have to live with their street lamps, and in many London streets at very close quarters, too; so it is only to be expected that they will have some interest in what the lamps look like. On the other hand, a council has a duty to light the streets, and if lamps are not being bought off the peg (they almost always are, unless the council is courageous enough to convert some of the old ones) the borough engineer, if (as is usually the case) there is no borough architect, will have to produce a design, or a designer from outside will have to be commissioned, and what happens if people in the borough take a strong dislike to the design?[1] It is one of those delicately balanced situations between governors and governed which abound in British democracy.

Fairly obviously, there are two politically possible ways of approach here for a borough council. They can say: 'We are the council; we have a statutory duty to perform; these are the lamps which, for excellent reasons, we are putting up . . .' and let their ratepayers lump it. If they sit tight, resolutely sticking together and weathering any storms (hoping no doubt their electors have short memories) they will probably get away with a *fait accompli*. The other, more democratic, way is to give the citizens some say in the type and design of lighting most appropriate to their borough. The Marylebone Borough Council, for instance, went to the length of putting up three different types of lamp outside the Town Hall and inviting citizens to ballot for their choice (as it turned out, the preference was for the most expensive); they have also gone to great trouble in converting old lamps in back streets. The Westminster City Council put up no fewer than seven different 'B' road lamps which could be seen lighting Abbey Orchard Street off Victoria Street, although these were put up primarily for councillors to look at and by the time the public was aware of their presence the choice (not a very happy one) had been made. After protests in Blackheath, Greenwich Borough Council announced publicly that concrete lamp-posts in certain streets would be taken down again and replaced by a design approved by the residents, who must, however, bear the extra cost (*Daily Telegraph* of December 8, 1959). There are, therefore, some borough councils which no one can accuse of not taking into account the ratepayers' views.

On the other hand there are many whose policy seems to be quite the opposite, and in order to show what tends to occur in such boroughs and the frustrations which the citizens are made to suffer, the following detailed account is given of recent happenings in Chelsea, a borough at present engaged in relighting the whole of its 'B' streets. Chelsea Borough Council has chosen its new lamp-posts with an absolute minimum of publicity and has then gone half-heartedly and disingenuously through some of the motions of giving the citizens a chance to criticize without, it would seem, the least intention of allowing criticisms to bear any fruit. The trouble this sort of thing has given Chelsea Borough Council should be an object lesson to other councils, though, of course, of all the Metropolitan Boroughs, Chelsea is the one they should be able to look to for a lead on matters of aesthetics and amenity.

Chelsea, it must be noted in passing, is a borough in which one party has almost immemorially had complete control of the council. When, after the war, the spirit of the times being what they were, the vestiges of an opposition made themselves felt (a notoriously bad housing record needed looking at), the council's Standing Orders were revised, as has been done by other councils, with the not surprising result that the minority found it almost impossible to be effective. This is very noticeable at council meetings, which are virtually proceedings for rubber-stamping decisions reached in secret by committees. Standing Orders have been used to rule out of order any discussion in full council of the residents' dissatisfaction over the new lighting scheme. Chelsea also has a borough engineer who, judging by the tone and style of his correspondence, is of the authoritarian variety. In such a council as this (the LCC is the classic example, of course) it is virtually impossible for the ordinary citizen to get any matter of public interest raised in full council. Councillors who are appealed to pass complaints to the appropriate committee; as far as the residents are concerned the rest is silence.

Around August Bank Holiday last year citizens of Chelsea, who have a good many late Georgian and early Victorian side-streets to be proud of, were surprised and in general pained to see going up in the streets near the Embankment new street lamps like those shown in 1. These, made by GEC, are hexagonal post-top lanterns glazed with white morocco (translucent) glass—four figured panels and two ribbed panels—containing two 40-watt 'warm white' fluorescent tubes, mounted on GEC tapered octagonal steel columns. These are painted with a gloss aluminium finish, and they cost, as the council has publicly admitted, £75 to £80 per lamp, though from another council statement they may cost as much as £90. The estimated cost of relighting with these lamps the 'B' roads in a borough with just over 50,000 residents is £153,000.[2]

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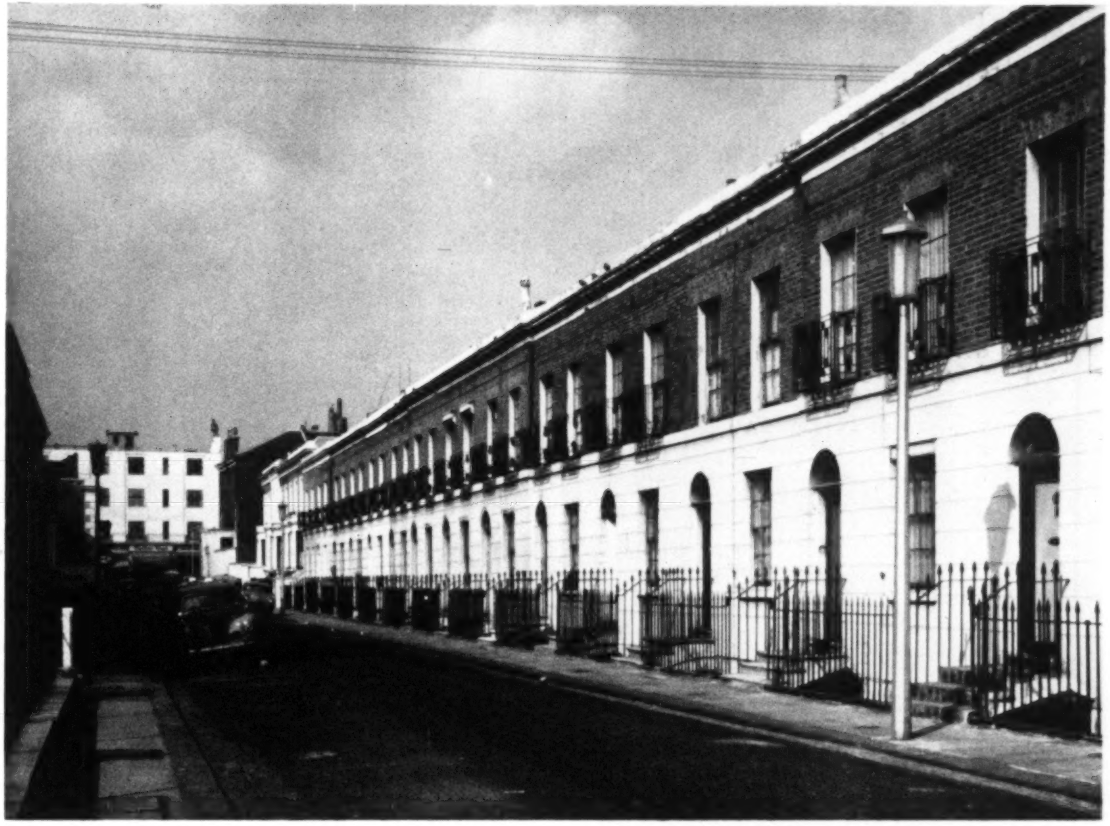

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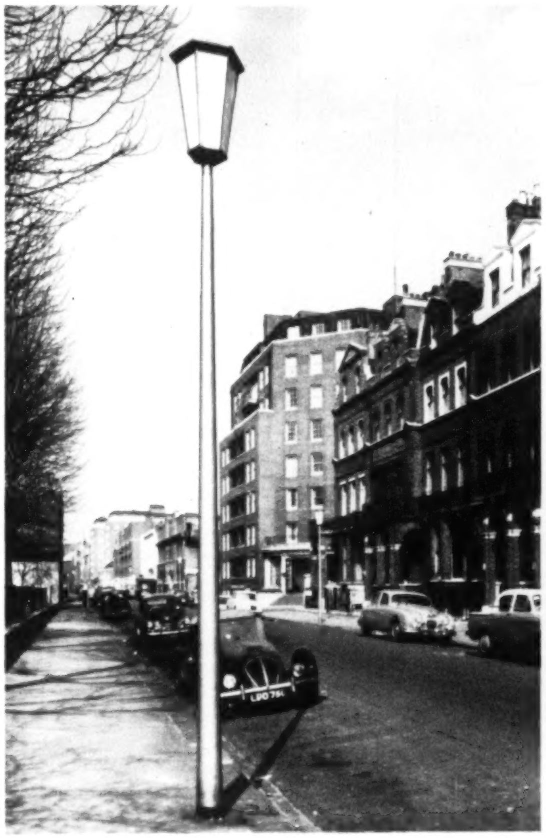

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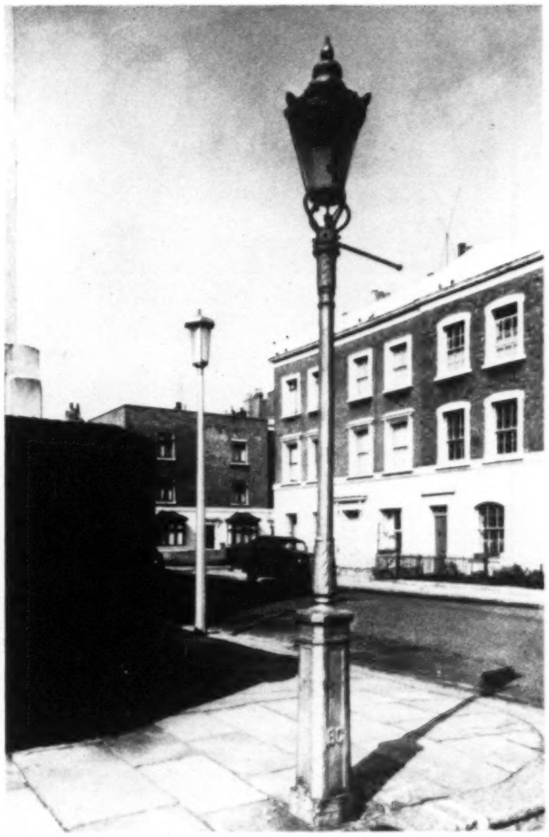

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When new lamp-posts are criticized it is often suggested that no better designs are available on the market. In the case of Chelsea's lamps this is certainly not so. Although improvement is still needed there are now some reasonably good designs available and some of these are shown below and on the next page as a reminder. These are all of the standard 15 ft. height, but if councils would lower the height where the architectural scale requires it, as suggested in the accompanying article, manufacturers would no doubt meet the demand.

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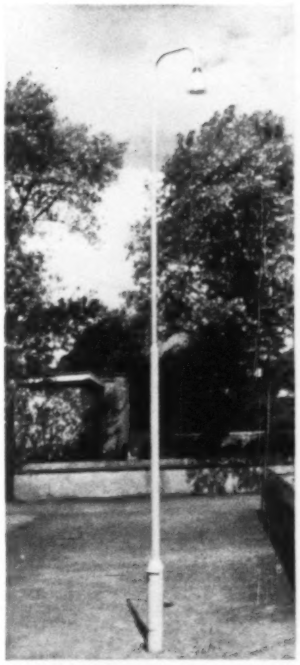

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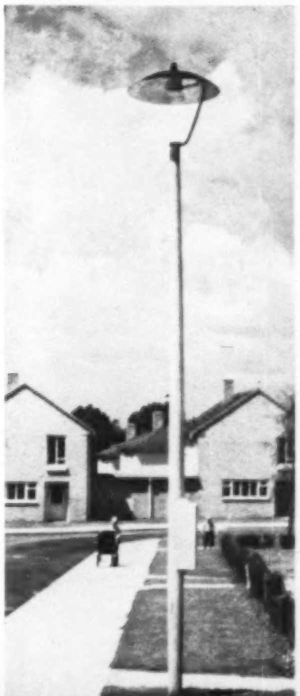

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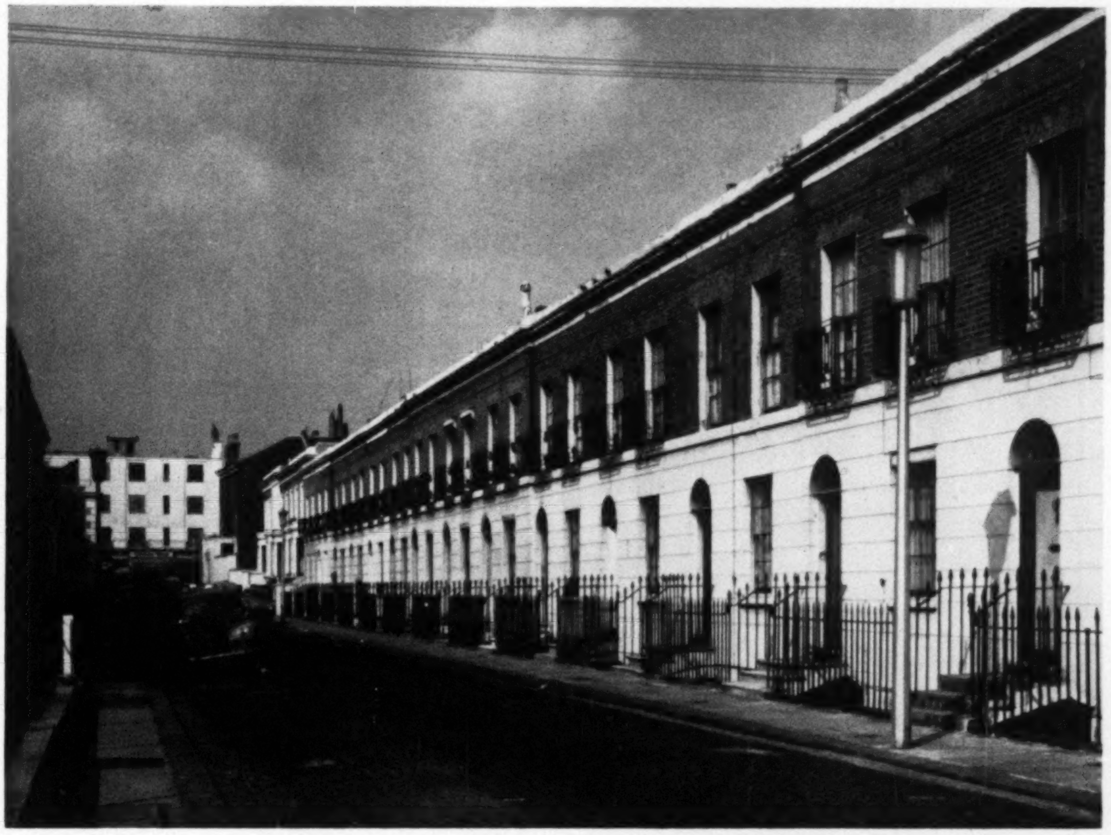

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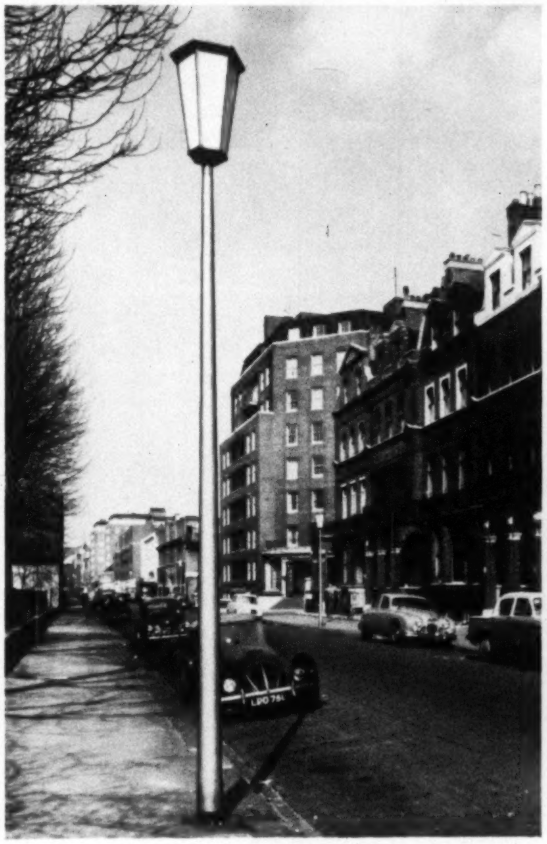

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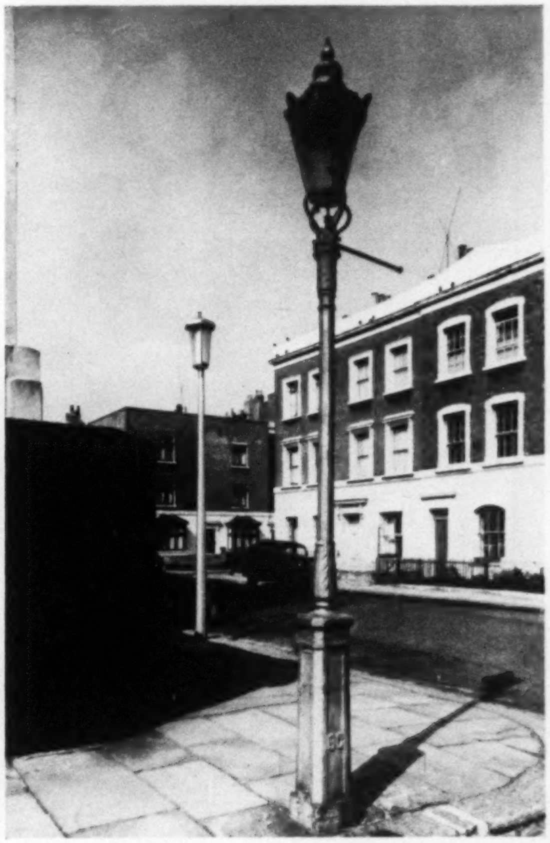

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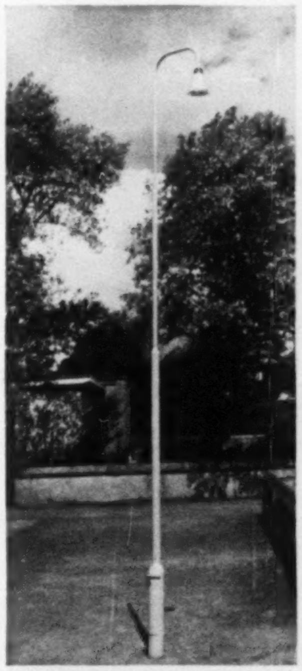

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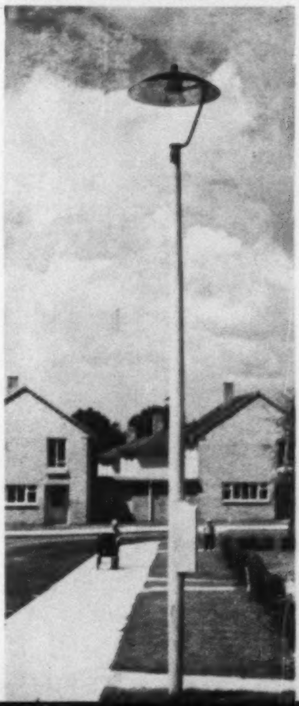
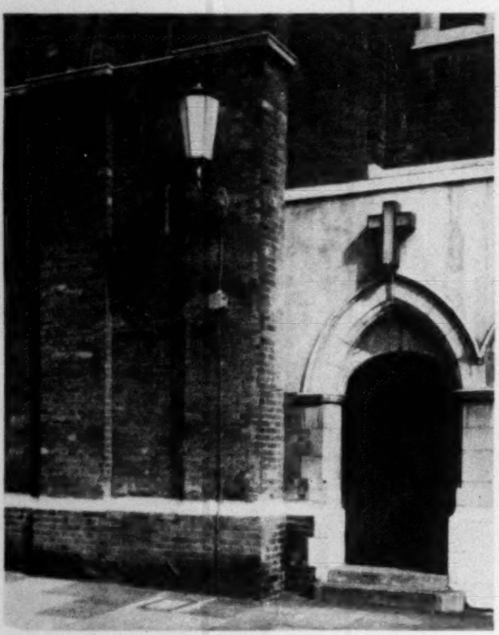


B

4, the bracket lamp in the Chelsea borough council's 'pilot scheme.' The untidy wiring and switch-box would be even more offensive on the small house front than on this building on which the design was tried out. 5, wall bracket as erected in Shawfield Street: the standard lantern mounted on a crude telescopic bracket. 6, another Chelsea bracket lamp, again with a crude attachment to the wall supplemented by wire stays.



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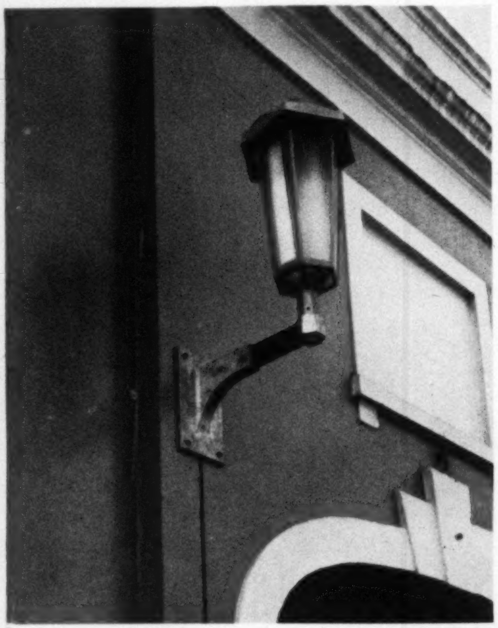

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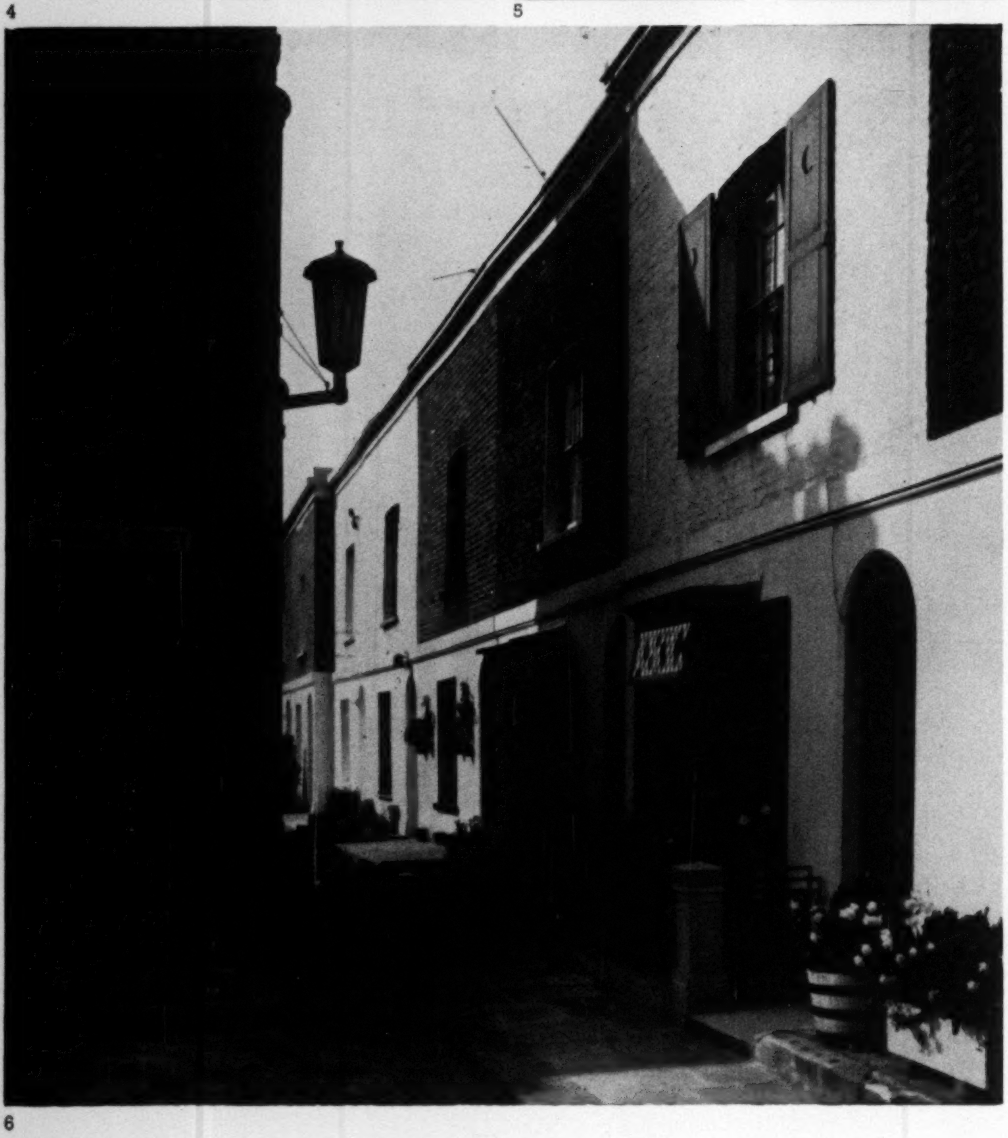

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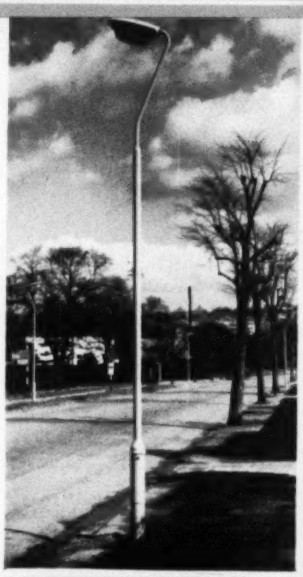

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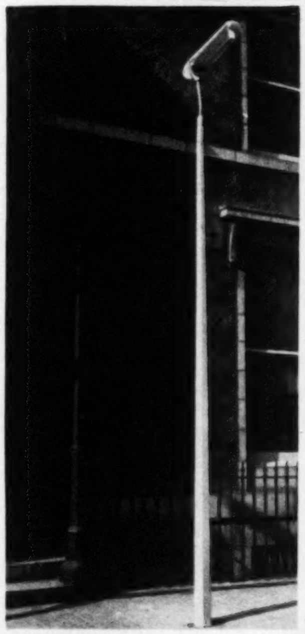

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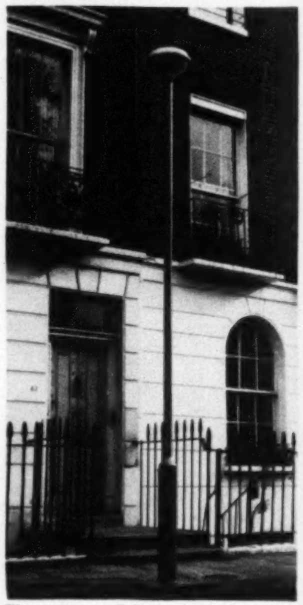

E

Three more well-designed 15 ft. lamp-posts. C, in steel—a fluorescent version of A (made by Abacus Engineering: designed by D. R. Mellor). D, in aluminium (made by Metal Developments: designed by Edward Langston). E, in steel (made by Abacus Engineering: designed by Richard Stevens).

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strong dislike to the new street lamps and wrote to the council and to the papers saying so. In fact the protests have gone on continuously ever since. To their surprise, they were blandly informed by councillors and officials that their protests were late in the day. They had had ample time to criticize the design of the new street lamps: two years according to some councillors, one year according to letters over the Town Clerk's signature. They were told that a 'pilot scheme' of twenty-one new lamps, including some on wall-brackets, had been put up in Chelsea Manor Street 'to test the opinion of residents,' and the 'pilot scheme' had been fully publicized; 'after thoroughly investigating the various types of equipment available the type now selected was considered the most suitable both from an aesthetic and a practical point of view.' And anyone who thought the lamps were awful for Chelsea's streets had had all the time in the world to say so.

This might seem on the face of it to be a tolerable example of democracy in action, even if the council's notion of 'full publicity' turns out to be recording their decisions in the Minutes (available to ratepayers at the public library or for a subscription of 30s. a year) which information was reproduced in the West London Press, an excellent local paper with a circulation of about 5,000. But anyone who did take the trouble to go to Chelsea Manor Street (a wide street running oddly enough beside the Town Hall—one of the reasons the council chose it—and consisting of a hotchpotch of modern buildings, flats, bank, cinema, public baths, vehicle repair-shops, London Electricity Board) to look for himself could not help being struck by one obvious fact: the 'pilot scheme' lamps, 2, are quite different from the lamps now going up in the borough's side-streets. True they are of the hexagonal post-top variety, but the design is in every way lighter and less coarse in detail, and they aren't topped by what the Minister of Works has called in public 'replicas of dustbins.' The 'pilot scheme' lamps consist of Revo lanterns, on Lucerna tapered tube aluminium columns, with white opal glass giving a diffused, less glaring light from the fluorescent tubes. Although this glazing is more expensive, the overall cost per lamp is understood to be not more than £50 complete.

Petitions were handed in from several streets, a vast number of letters and telephone calls poured into the Town Hall, and eventually in October an attempt was made to justify the scheme in a Works and Highways Report to the full council.[3] Among other odd assertions, this replacement of one manufacturer's lamp by another's at roughly double the price is airily described in the report as 'slight modifications.' The council show no sign of realizing that to invite ratepayers to give an opinion of a lamp that is not in fact being used, and then to put up another type on which they don't invite any opinion, is somewhat disingenuous. It may be connected with the fact that the Council Minutes show that the design of the 'pilot scheme' lamps was submitted to the Royal Fine Art Commission (at the Commission's suggestion) and the Chelsea Society for comment, and both of them were very uncomplimentary about it. It is interesting, too, that the earlier Minutes describe the purpose of the 'pilot scheme' as 'to ascertain the effect of the equipment' without anything about 'testing the opinion of residents.' To anyone checking back, this can hardly fail to give the impression of an afterthought resulting from the large number of protests.[4]

Compared with the actual design of the standard lamps now being put up in Chelsea, for which so far no designer has been named and which do not appear in the current GEC catalogue, this bit of council double-talk may seem insignificant. But to the ratepayers who have looked into the business a bit more closely a certain pattern begins to emerge. In these small residential streets the mounting height of the new lamps is a sore point, because as well as being higher than the old gas lamps the glare from vertical fluorescent tubes is thrown sideways full into first-floor bedroom windows and not down on to the pavement.

Vigilant residents looked up the BSI Code of Practice and, on enquiring at the Town Hall about this, had letters over the signature of the Town Clerk (and even of the Mayor) stating that the 15-foot mounting height 'is a Ministry of Transport *regulation*,' and a council spokesman repeated this in a statement to the local paper. The borough engineer in a letter to a resident's solicitor flatly contradicted his committee chairman by saying he does not propose to screen any lights, only to be contradicted again by a letter over the Town Clerk's signature which takes refuge behind 'after the lamp has been put into lighting and an opportunity afforded to judge its effect' (what was the 'pilot scheme' supposed to be for?) 'the question of screening will be considered.' Recently the committee decided to 'postpone any action (on requests for screening) for a period of six months when they anticipate the scheme will be complete. Then there are the two councillors who wrote to residents implying that the Royal Fine Art Commission approved the design of the 'pilot scheme' when in fact they severely criticized it; the official version sent out from the Town Hall in answer to all those who wrote says 'The Royal Fine Art Commission were consulted as to the scheme for the main roads and the side-streets and their views were taken into consideration' and can some of them be blamed for interpreting this as approval?

All these are small points, but to the ordinary resident (and a very large number have protested in every way they can think of) they seem to add up to either intentional or unintentional misrepresentation of the lighting scheme to the ratepayers who are footing this substantial bill (the loan won't be paid off till 1974) as well as suggesting a standard of council accuracy more worthy of some backwoods rural district than a Metropolitan Borough.

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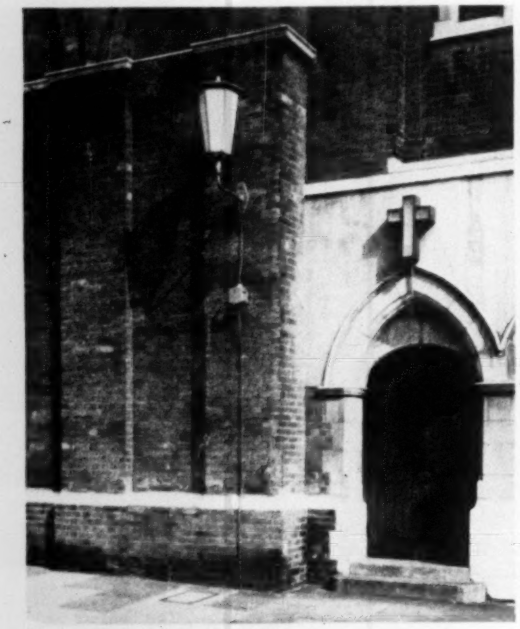
4, the bracket lamp in the Chelsea borough council's 'pilot scheme.' The untidy wiring and switch-box would be even more offensive on the small house front than on this building on which the design was tried out. 5, wall bracket as erected in Shawfield Street: the standard lantern mounted on a crude telescopic bracket. 6, another Chelsea bracket lamp, again with a crude attachment to the wall supplemented by wire stays.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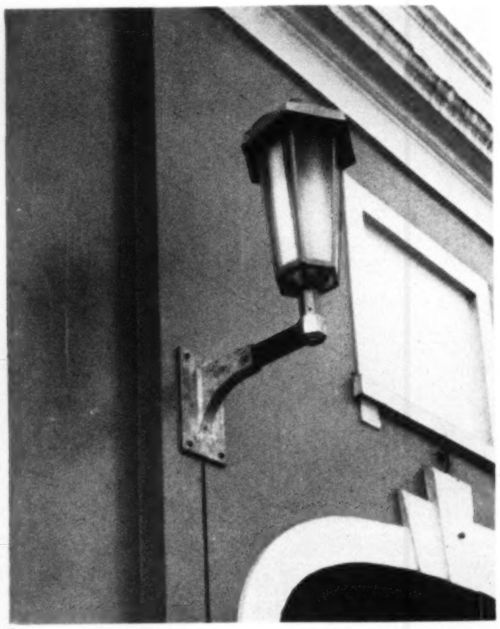
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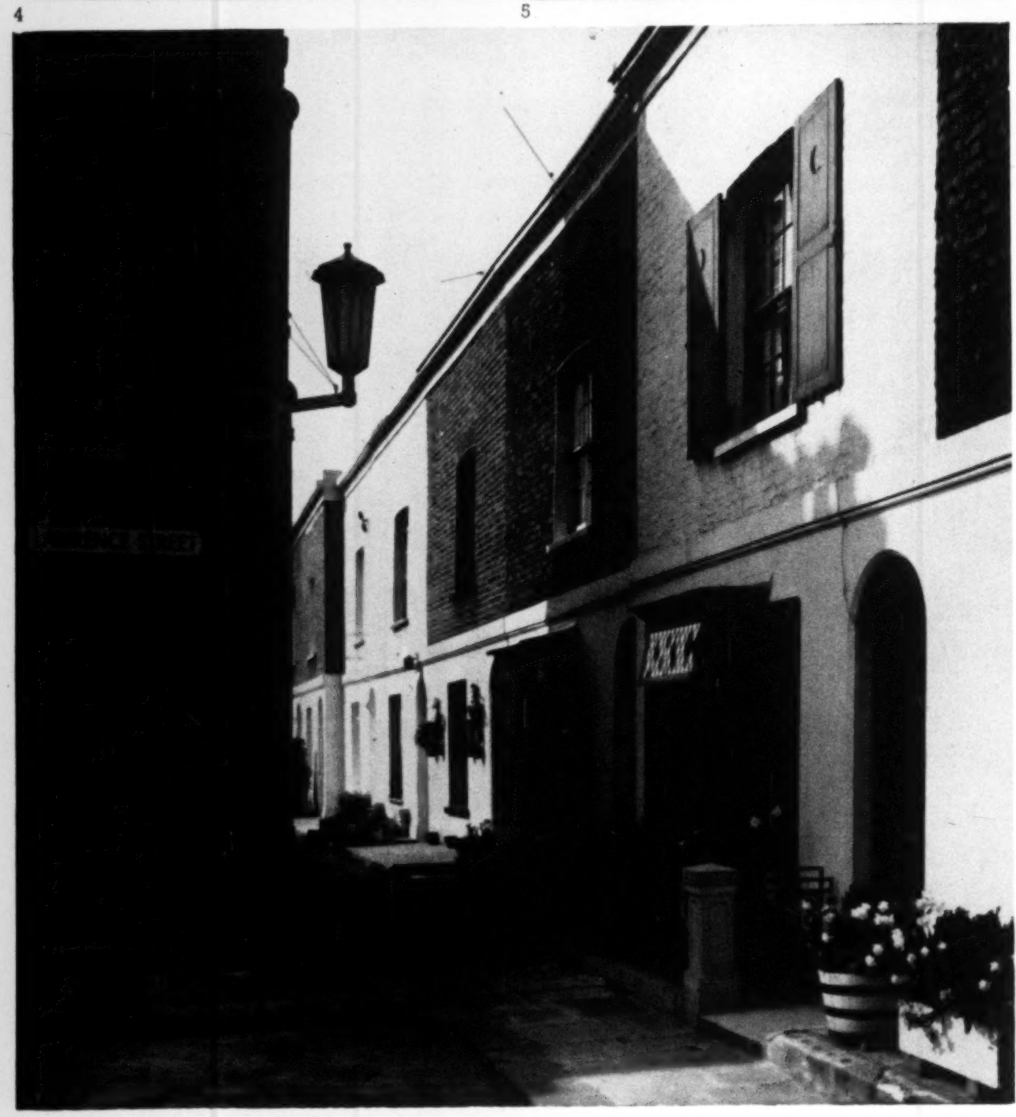
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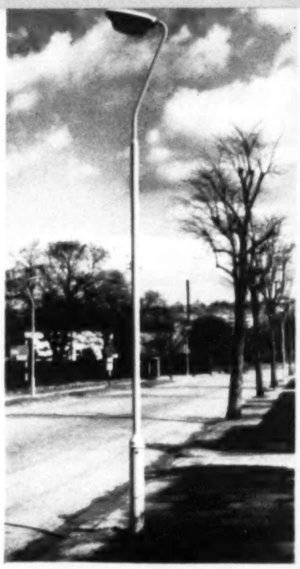
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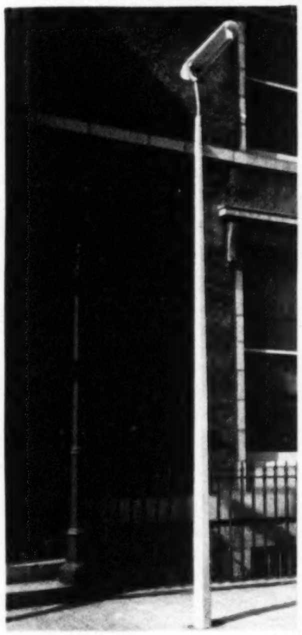
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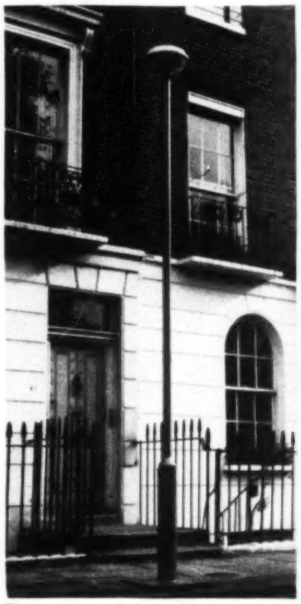
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Three more well-designed 15 ft. lamp-posts. C, in steel—a fluorescent version of A (made by Abacus Engineering; designed by D. R. Mellor). D, in aluminium (made by Metal Developments; designed by Edward Langston). E, in steel (made by Abacus Engineering; designed by Richard Stevens).

Continued from page 412]

strong dislike to the new street lamps and wrote to the council and to the papers saying so. In fact the protests have gone on continuously ever since. To their surprise, they were blandly informed by councillors and officials that their protests were late in the day. They had had ample time to criticize the design of the new street lamps: two years according to some councillors, one year according to letters over the Town Clerk's signature. They were told that a 'pilot scheme' of twenty-one new lamps, including some on wall-brackets, had been put up in Chelsea Manor Street 'to test the opinion of residents,' and the 'pilot scheme' had been fully publicized; 'after thoroughly investigating the various types of equipment available the type now selected was considered the most suitable both from an aesthetic and a practical point of view.' And anyone who thought the lamps were awful for Chelsea's streets had had all the time in the world to say so.

This might seem on the face of it to be a tolerable example of democracy in action, even if the council's notion of 'full publicity' turns out to be recording their decisions in the Minutes (available to ratepayers at the public library or for a subscription of 30s. a year) which information was reproduced in the West London Press, an excellent local paper with a circulation of about 5,000. But anyone who did take the trouble to go to Chelsea Manor Street (a wide street running oddly enough beside the Town Hall—one of the reasons the council chose it—and consisting of a hotchpotch of modern buildings, flats, bank, cinema, public baths, vehicle repairshops, London Electricity Board) to look for himself could not help being struck by one obvious fact: the 'pilot scheme' lamps, 2, are quite different from the lamps now going up in the borough's side-streets. True they are of the hexagonal post-top variety, but the design is in every way lighter and less coarse in detail, and they aren't topped by what the Minister of Works has called in public 'replicas of dustbins.' The 'pilot scheme' lamps consist of Revo lanterns, on Lucerna tapered tube aluminium columns, with white opal glass giving a diffused, less glaring light from the fluorescent tubes. Although this glazing is more expensive, the overall cost per lamp is understood to be not more than £50 complete.

Petitions were handed in from several streets, a vast number of letters and telephone calls poured into the Town Hall, and eventually in October an attempt was made to justify the scheme in a Works and Highways Report to the full council.[3]

Among other odd assertions, this replacement of one manufacturer's lamp by another's at roughly double the price is airily described in the report as 'slight modifications.' The council show no sign of realizing that to invite ratepayers to give an opinion of a lamp that is not in fact being used, and then to put up another type on which they don't invite any opinion, is somewhat disingenuous. It may be connected with the fact that the Council Minutes show that the design of the 'pilot scheme' lamps was submitted to the Royal Fine Art Commission (at the Commission's suggestion) and the Chelsea Society for comment, and both of them were very uncomplimentary about it. It is interesting, too, that the earlier Minutes describe the purpose of the 'pilot scheme' as 'to ascertain the effect of the equipment' without anything about 'testing the opinion of residents.' To anyone checking back, this can hardly fail to give the impression of an afterthought resulting from the large number of protests.[4]

Compared with the actual design of the standard lamps now being put up in Chelsea, for which so far no designer has been named and which do not appear in the current GEC catalogue, this bit of council double-talk may seem insignificant. But to the ratepayers who have looked into the business a bit more closely a certain pattern begins to emerge. In these small residential streets the mounting height of the new lamps is a sore point, because as well as being higher than the old gas lamps the glare from vertical fluorescent tubes is thrown sideways full into first-floor bedroom windows and not down on to the pavement.

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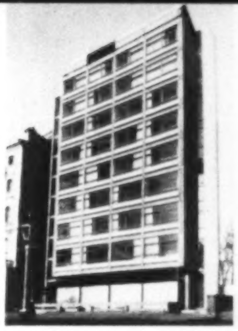
So now the council has put up standards in this hitherto charming street, one of the show streets of Chelsea, where they are monstrously out of scale as in similar streets in other parts of the borough.

Apart from this inappropriate wall bracket and an apparently improvised version for corner sites put up at the junction of Lawrence Street and Upper Cheyne Row, 6 (an ingenious borough engineer's special this one), Chelsea's council seems to have left out of their calculations any idea of accommodating their lighting scheme to the special character of the small side-streets which comprise at least one quarter of the borough. 'As a matter of policy' they have refused to consider any variant of the 15-foot standards with their glaring fluorescent light which, as many people have already remarked, are so much more successful at floodlighting the fronts of the houses than illuminating the roadway; traffic in these streets at night is almost entirely residential just because they are so narrow. They have scouted all suggestions of converting the existing elegant 12-foot gas lamps, 3, to electricity for the small streets, mainly on the grounds that they are all corroded at the base, though there is no evidence that they have followed the example of other London boroughs and tried to salvage enough of the gas lamps for the 40 or 50 streets concerned and convert them to electricity so as to preserve the character of the parts of Chelsea people come from all over the world to see. (It is interesting to note, however, that gas bracket lamps on the Cremorne Estate have been converted to electricity, if only experimentally.) Residents have even been told that conversion, which it has been established can be done for about £6 per lamp, would be more expensive than new lamps at £80 or so! It is not difficult to deduce a reason other than pure regimentalism for this inflexibility. The council have published the information in their Minutes that next year the borough engineer's department proposes to take over the maintenance of the street lighting from the London Electricity Board, and the fewer the types of lamp, the cheaper and less skilled the staff needed to look after them, with less visible impact on the rates (the gas lighting would now be running at an estimated annual £34,000, whereas at rates obtaining in November, 1956, the annual estimated cost of the new electric lighting is £38,000. But, says the council, in 1974, when the loan is paid off, this will be reduced by £18,000 a year—ratepayers naturally hope that the value of the £ won't go down too much by then).

Anyone reading the evidence offered by the Chelsea Borough Council representatives to the Royal Commission on Local Government in Greater London can hardly help being struck by the readiness of this small borough (which might, under any radical reorganization of metropolitan boroughs, be absorbed into Fulham, Kensington and Westminster) to take on any and every local government function—planning, education, health, and, of course, street lighting maintenance. The rigid, inappropriate and pretty expensive relighting scheme which is being forced on the ratepayers can then be seen as a prestige move in Chelsea's fight for autonomy. However much one may applaud the motive, one can only deplore the methods. Some people may even feel that if the presentation of the lighting scheme is typical of the local government they are going to get, being part of Fulham or Westminster might have its points.

The moral of all this is that as long as provision of street lighting is considered primarily as a road engineering matter, English towns and boroughs will continue to be defaced by inappropriate street lamps in the name of efficiency and 'cheerfulness' by councillors without the aesthetic judgment to stand up to the advice of technicians. As the Ministry of Housing and Local Government has acknowledged responsibility for advising local authorities on the preservation of buildings and on urban tree planting, it should also assume responsibility for trying to guide them on aesthetics of street furniture, especially lighting. The present Minister of Transport has been a Parliamentary Secretary to a Minister of Housing, and when he has some respite from his traffic preoccupations he might well be sympathetic to such a proposal.


1

current architecture

recent buildings of interest briefly illustrated

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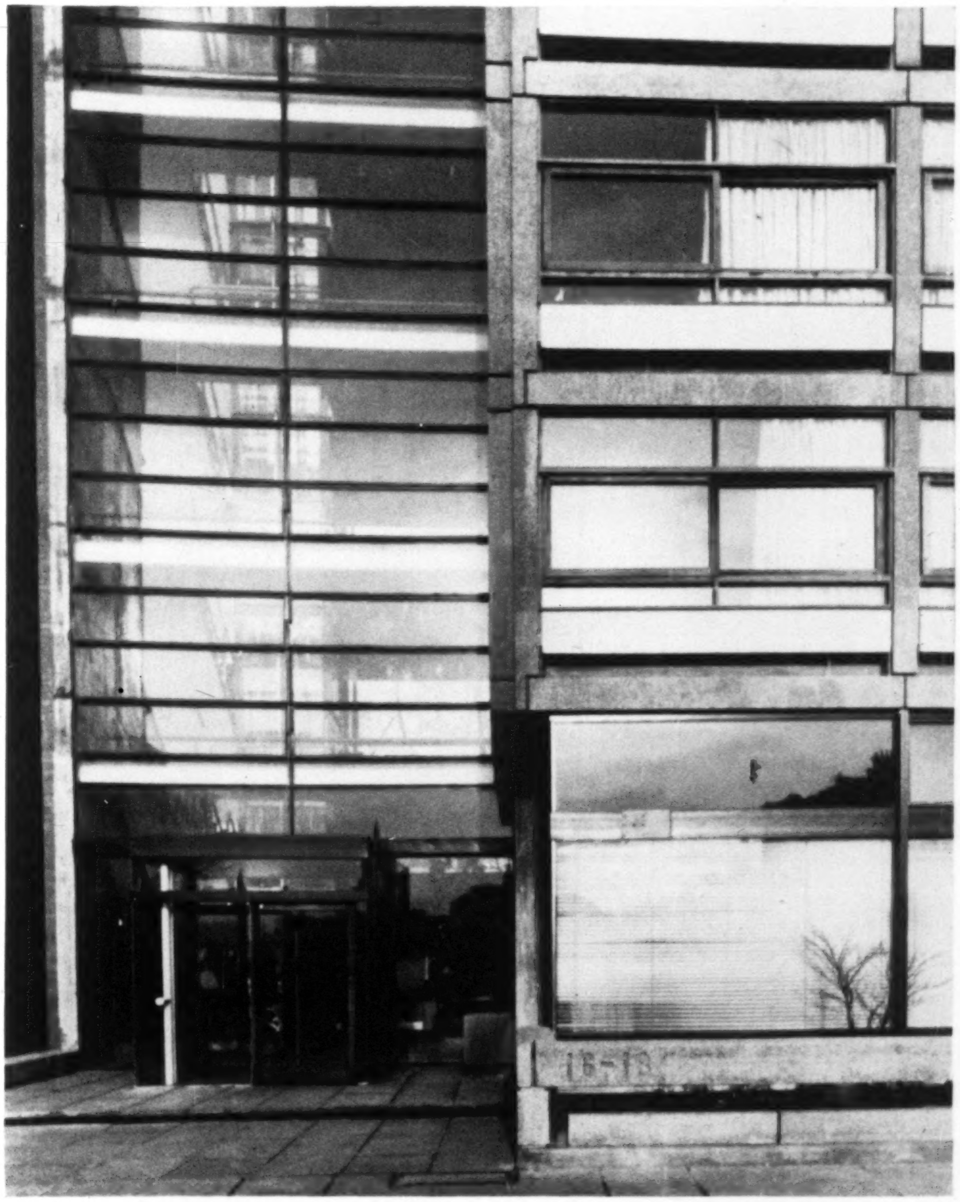
2, close up, with the entrance hall and staircase and glazed lift tower on the left. On the right are the assembly hall and conference room on the ground floor and study-bedrooms on the upper floors.



2

STUDENTS' HOSTEL, PRINCES GARDENS, LONDON, S.W.7

ARCHITECTS: RICHARD SHEPPARD, ROBSON AND PARTNERS

Weeks Hall is the first hostel to be built in Princes Gardens as part of the residential precinct for the students of the Imperial College of Science and Technology. It is designed as a separate building but will be linked with future developments through the glass-fronted staircase and lift tower.

The ground floor contains the common and dining rooms, assembly hall, conference room and offices. In to bring the lantern nearer to the wall—a concession more apparent than real as the bracket, 5, is telescopic and one which went nowhere in dealing with the simple objection that the whole thing was out of keeping and out of proportion.

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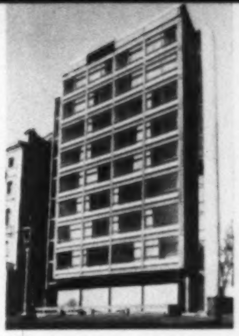

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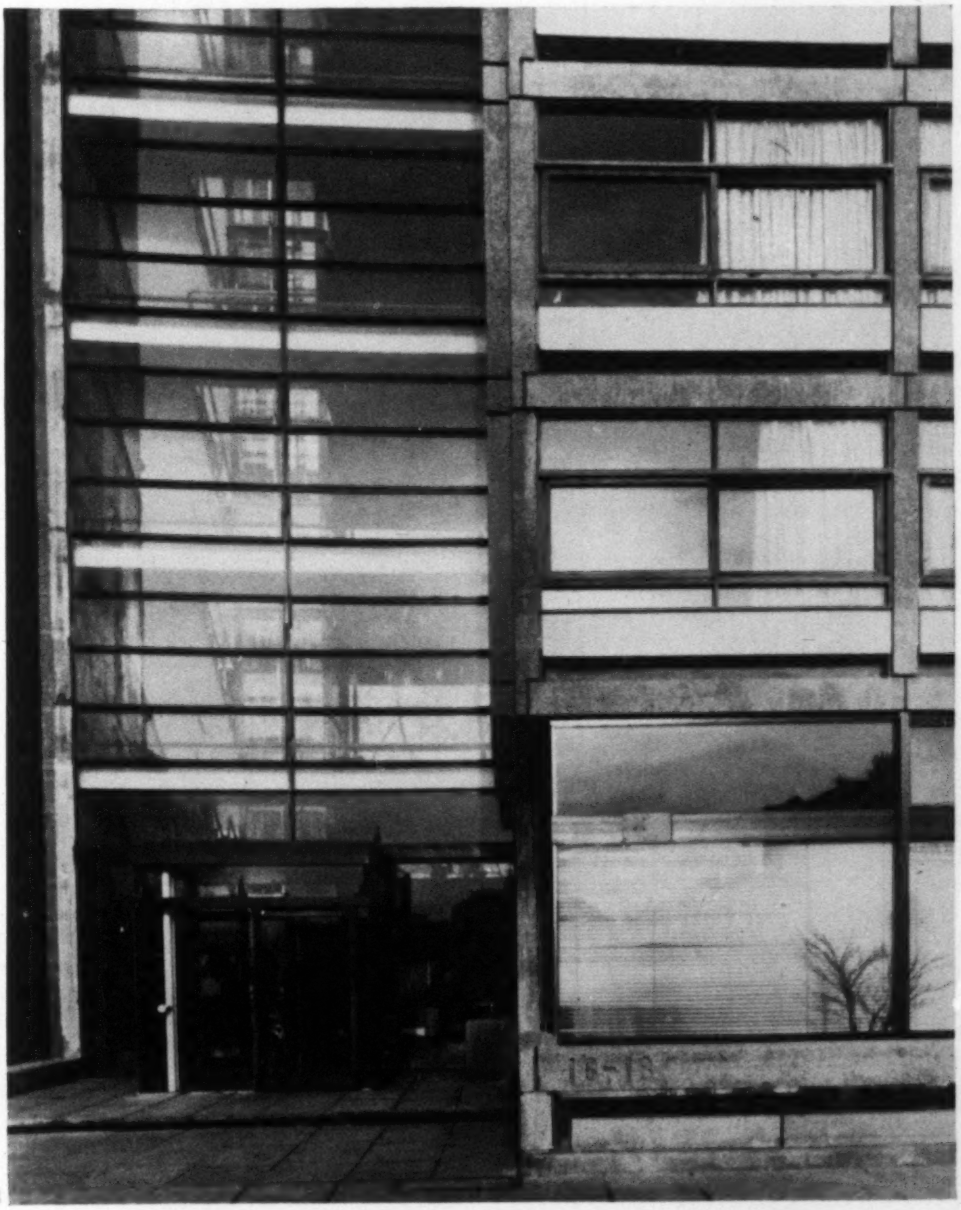

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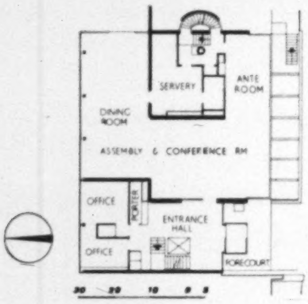
Students' Hostel, London, S.W.7

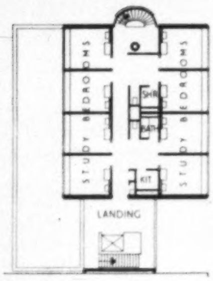
3, 4, inside a typical study-bedroom. 5, the assembly and conference room on the ground floor, with the dining room beyond.

3

4



ground floor plan



upper floor plan

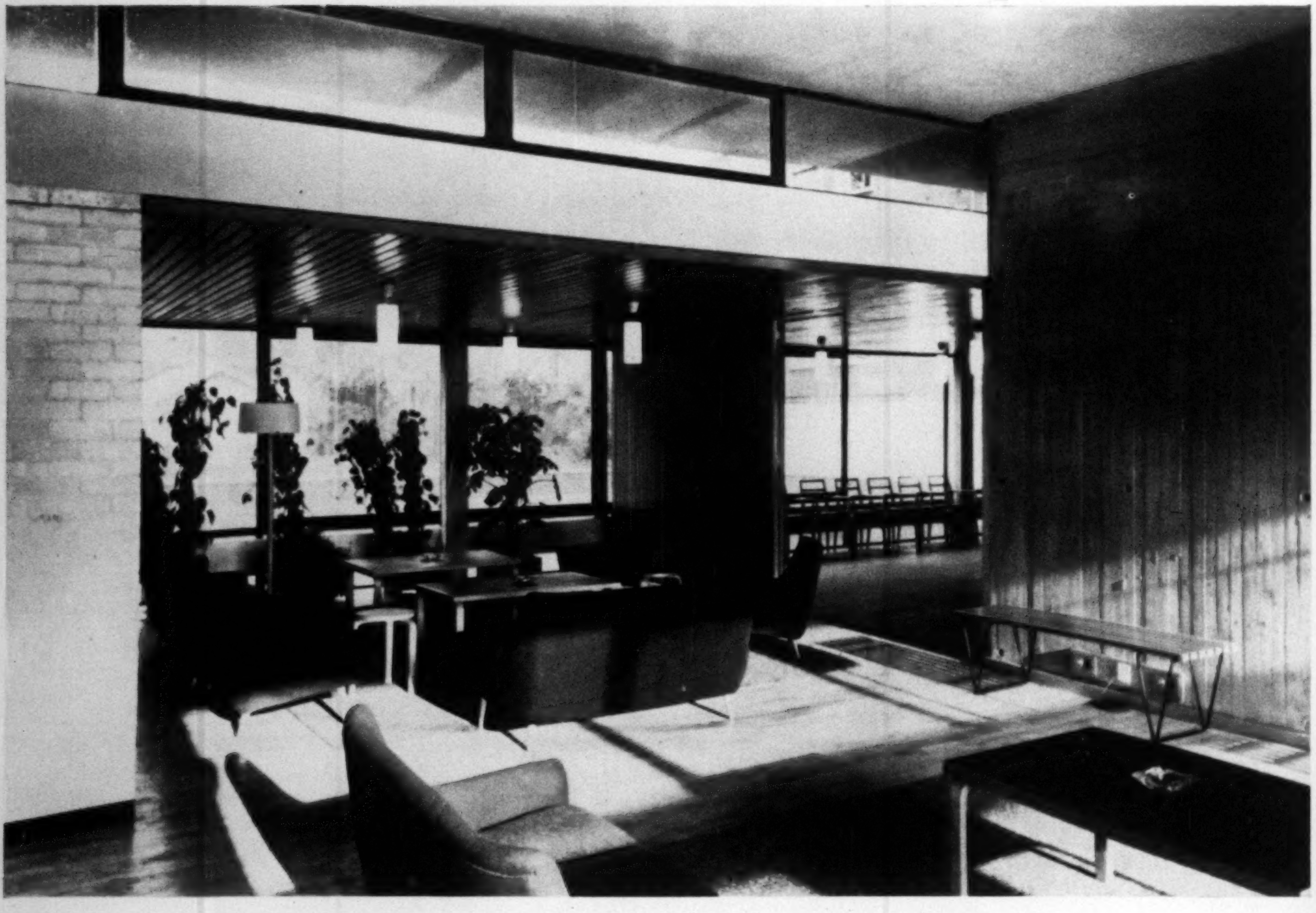
the basement are the heating plant, housekeeper's room and four study-bedrooms. The other study-bedrooms are grouped in sets of eight on each of the first to eighth floors, each set sharing a kitchen, bath, shower and two w.c.'s. On the ninth floor is the warden's flat.

The structure is basically three reinforced concrete cross walls supporting precast prestressed floors, which gives complete freedom from columns and projecting beams. External cladding is precast concrete units faced with Cornish granite and Norwegian quartz. The reinforced concrete structure is exposed at ground floor and penthouse levels, where Cornish Lee Moor sand was used in the mix to give better weathering properties.

The horizontal cill units also form the 3 ft. high back-up walls to meet the fire regulations. These units sit on the edge of the structural floor slab and the vertical units are notched into them above and below. There are no bronze cramps as in traditional cladding fixing. The units are profiled so that they restrain each other and bronze bolts or dowels key them into the structure. The in-situ concrete flank walls have projecting nibs at floor levels on which the L-shaped horizontal units sit. The vertical units in turn rest on these and are prevented from falling outwards by the horizontal units on the floor above.

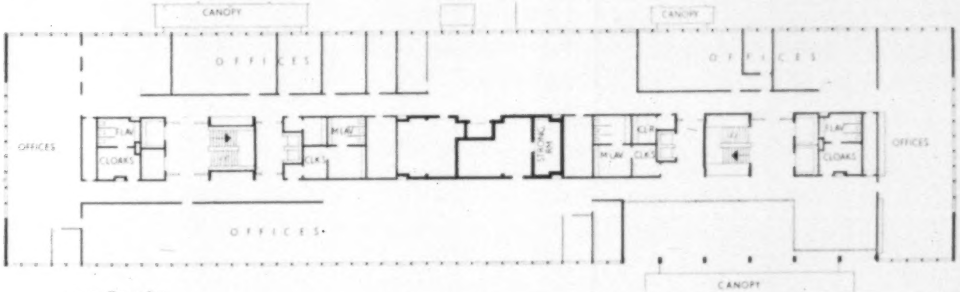
The elliptical secondary stairs were precast in flights and bolted direct to the floor slabs. The study-bedroom windows are Burma teak untreated externally and oiled internally. All other windows are metal, painted dark blue-grey. Internally, the structural walls and columns are smooth concrete. Ground floor brick-work is fair faced, flush pointed and painted gloss white. Woodwork is polished beech. The study-bedrooms are plastered and painted white, but occasionally a colour is used on one wall. Each room has a built-in wardrobe and cupboard unit made of polished beech. A precast terrazzo window seat is fitted with a heater below it which blows warm air up through slots in the back. The lift is in a steel cage fixed in the main staircase well and glazed with polished wired plate glass.

5



OFFICES AT BILLINGHAM, CO. DURHAM

ARCHITECTS: ARCHITECTURAL DEPARTMENT OF ICI LTD.


CANOPY
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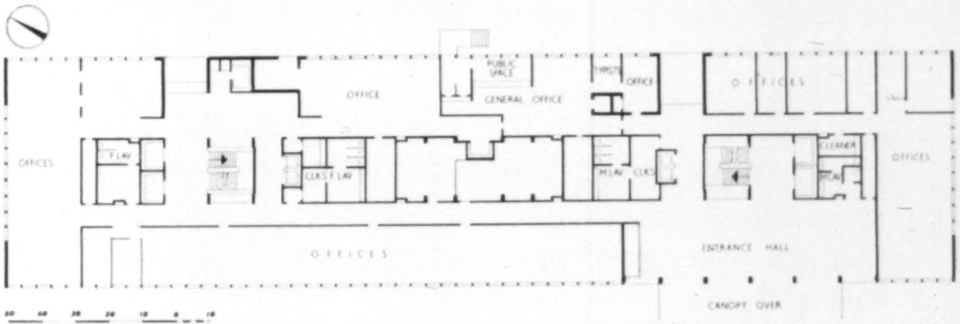
upper floor plan

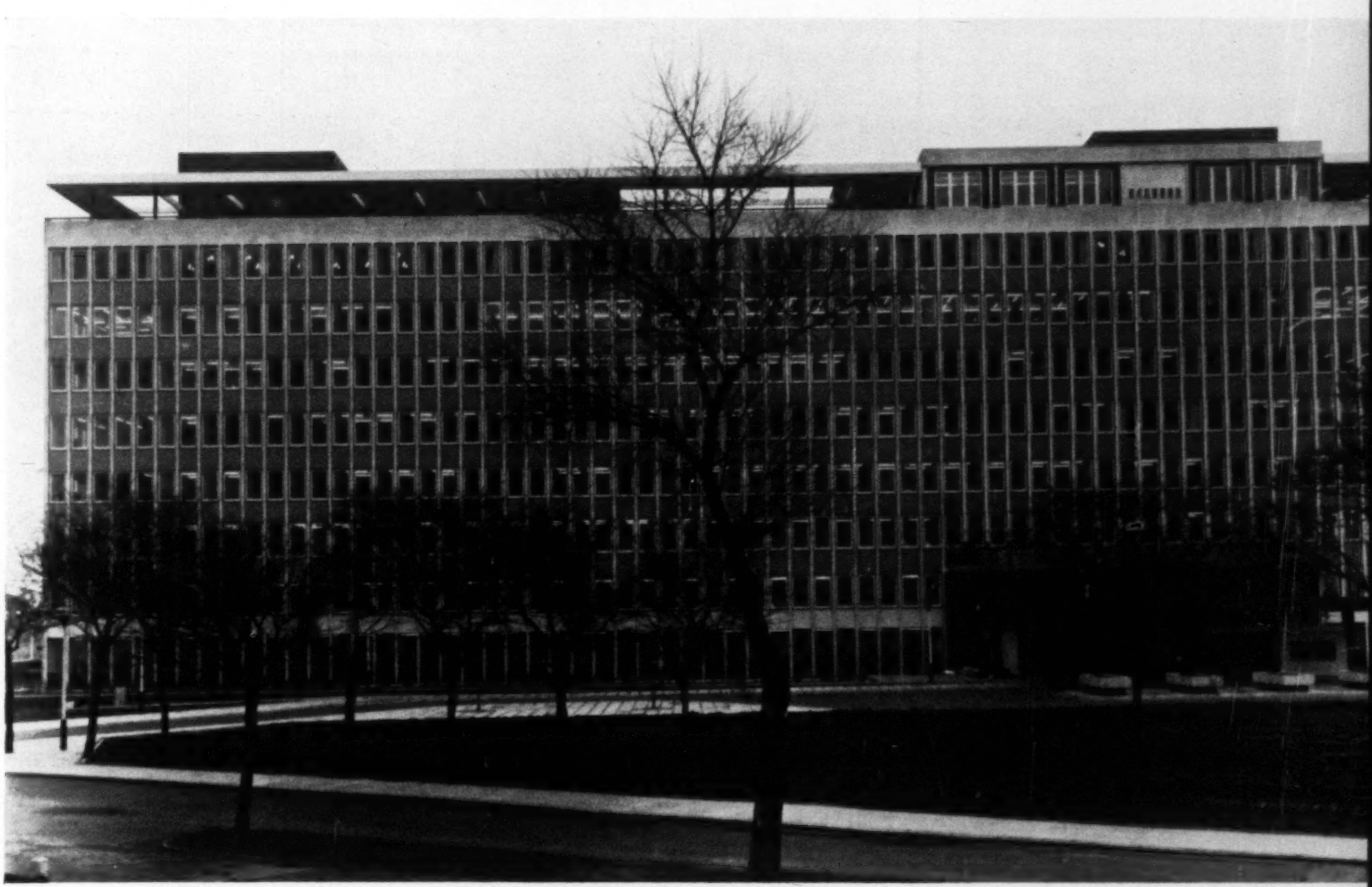

PUBLIC SPACE
TYPISTS
OFFICE
OFFICE
GENERAL OFFICE
OFFICES
OFFICES
F LAV
CLKS F LAV
M LAV
CLKS
CLEANER
F LAV
OFFICES
OFFICES
ENTRANCE HALL
CANOPY OVER

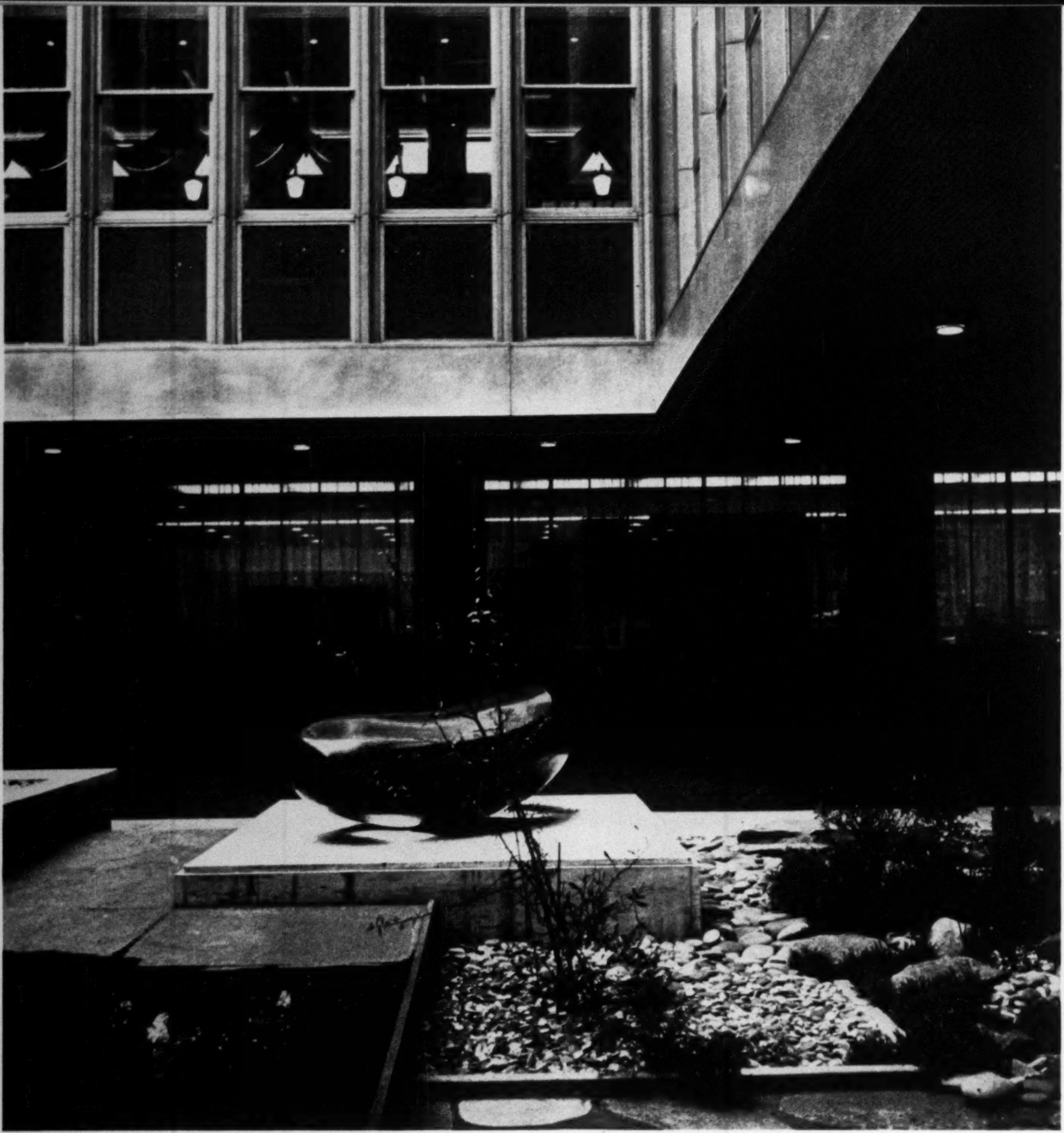
ground floor plan

This eight-storey block with a partial ninth floor above the general roof level is for the Billingham Division of ICI Ltd. The 285 ft. long building is designed on a 4 ft. 6 in. module, so that two modules give approximately a 9-ft. room. Flanking a central service core are 6 ft. wide corridors opening into 17 ft. deep rooms, which are on the perimeter of the building. A board room and two conference rooms are on the top floor.

The structure rises from a 3-ft. reinforced basement floor acting as a raft. The basement walls are 12 in. reinforced concrete. Floors are built up of precast units spanning 24 ft. Internal partitions are of brick and plaster, painted. Offices have linoleum floor covering and perforated metal acoustic ceilings.

6, *the west elevation. The building is ventilated mechanically and the windows, which are of aluminium alloy with teak outer frames, are locked shut except for cleaning. Cladding is Portland stone and Westmorland riven slate 'tiles' which have been cast with the precast spandrel panels and bolted between structural mullions.*





7, inside the courtyard, looking towards the trade counter on the ground floor. Landscape adviser for garden, Philip Hicks; sculpture and mosaics by Jupp Dernbach-Mayen.

WALLPAPER AND FABRIC SHOWROOMS, LONDON, W.1

ARCHITECTS: SLATER AND UREN

The building is in Berners Street and is the new headquarters of Messrs. Sanderson. It consists of a main six-storey block built around a centre well and a smaller eight-storey block behind. In the centre well are the entrance to the car park in the basement, which has space for 70 cars, and a Japanese garden of rocks, sculpture, a rectangular pool, evergreen plants and a weeping beech tree.

The main block is 230 ft. long by 45 ft. deep and the in situ reinforced concrete structural frame is supported by columns on a 27 ft. grid—the remaining 9 ft. on the perimeter is cantilevered from the main structure above the ground floor.

The Berners Street façade can only be seen obliquely, so emphasis has been placed on the verticals by setting the curtain wall back several inches in the mullions which run from the top to first floor level. Above the entrance canopy the glass is set still further back to give variety to the façade. The mullions are on a 4 ft. 6 in. module around the building and are made of aluminium. They are symmetrical in section and contain all the services, including rainwater pipes, heating and hot water pipes, air-conditioning ducts and sprinkler risers.

At ground floor level the set-back square columns are exposed, and behind them are the fully glazed trade showroom windows. The ground floor has 5,000 sq. ft. of trade

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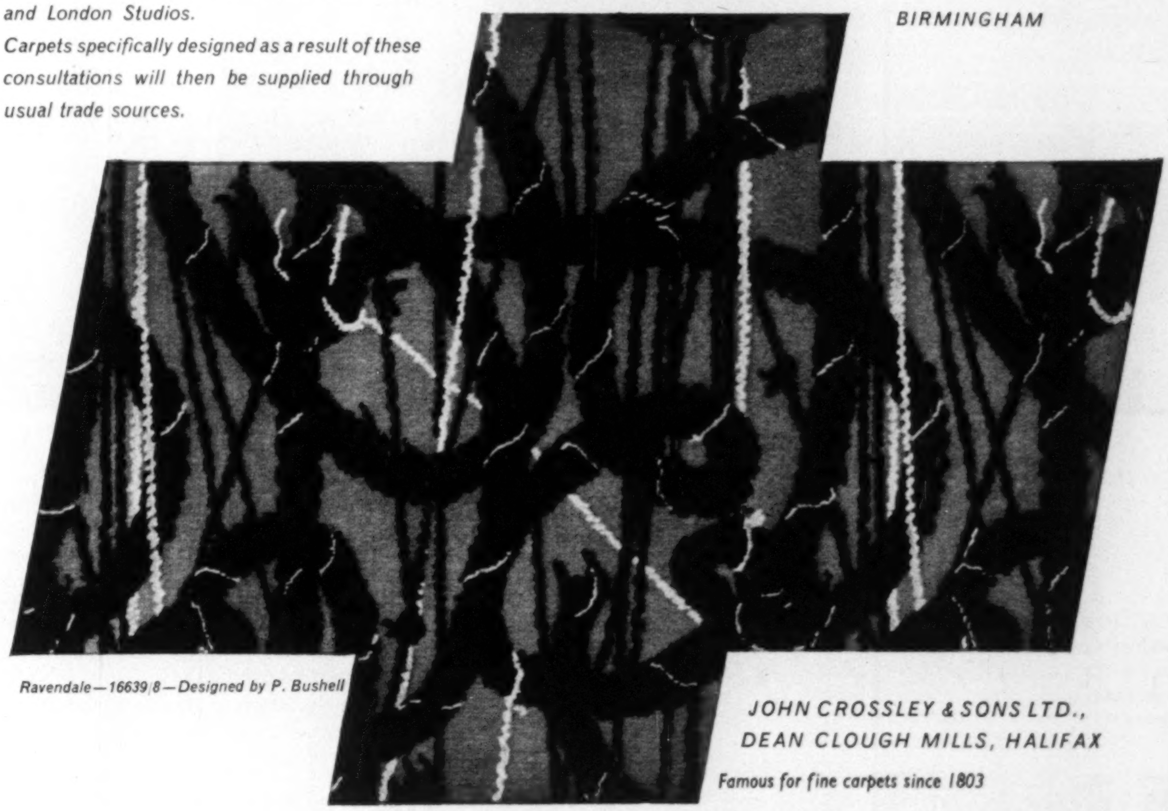

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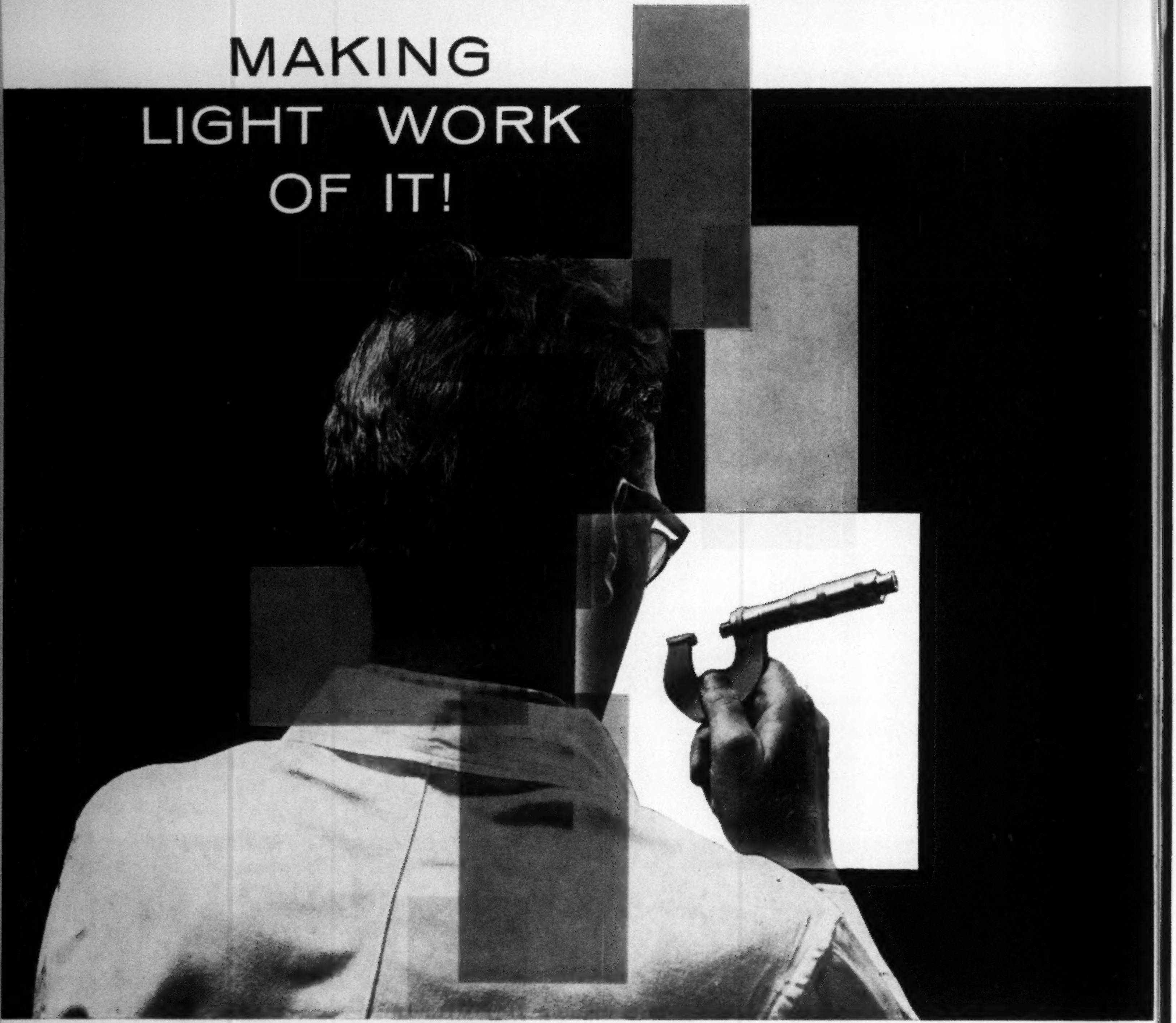

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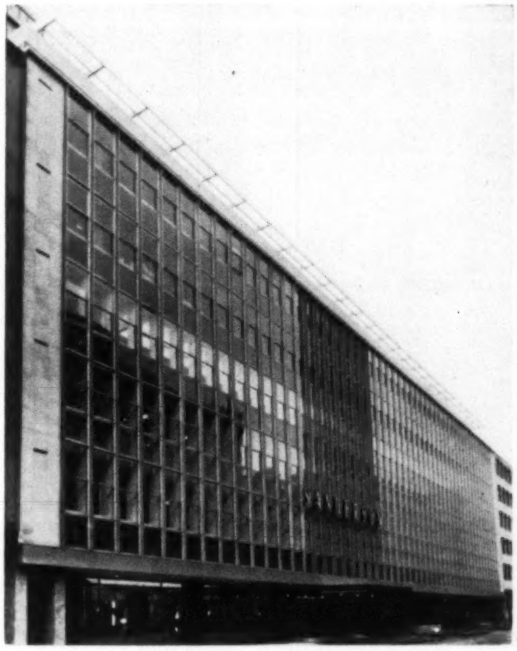
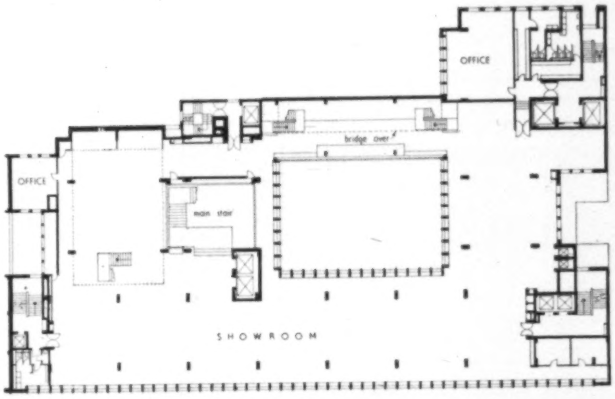
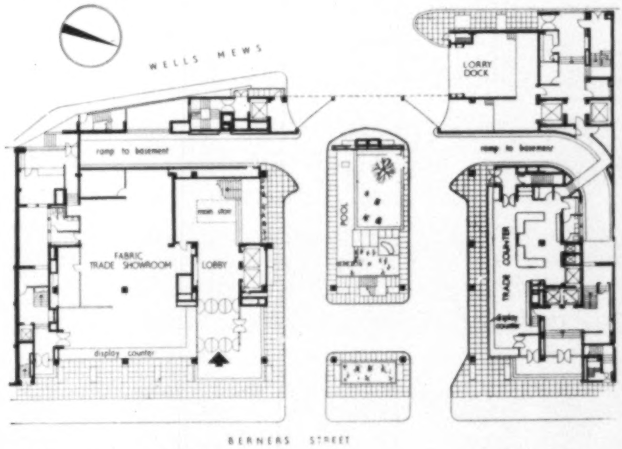
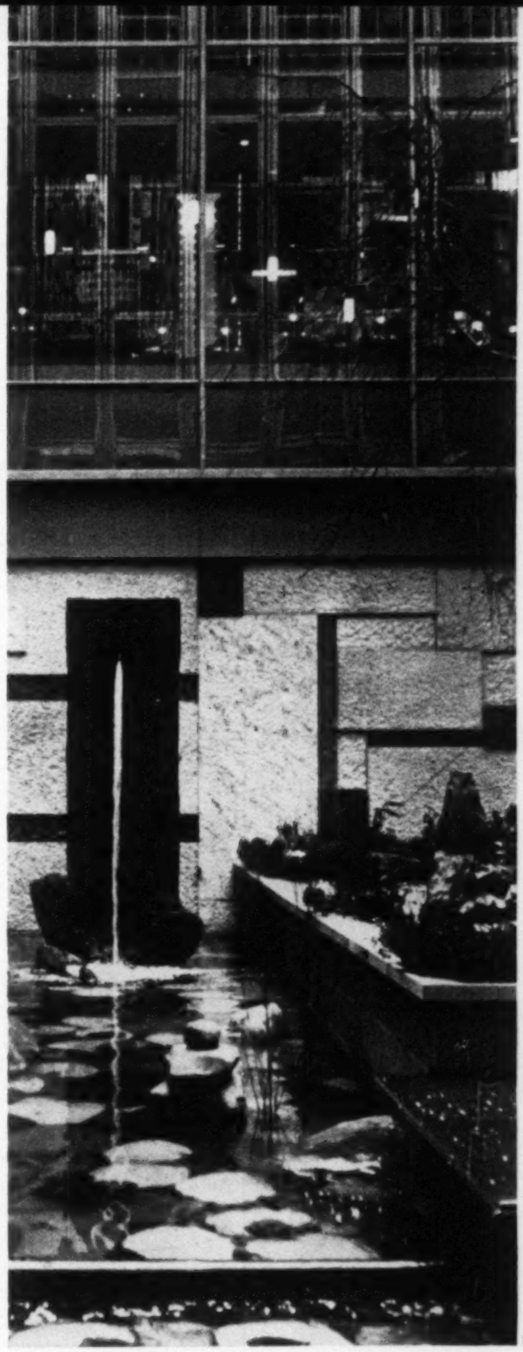
Wallpaper and fabric showrooms, London, W.1


8

showrooms. There is 34,000 sq. ft. of retail showroom area on the first, second and third floors, with some of the display areas running through two storeys. The remaining floors are devoted to offices. The showroom interiors are described in detail in ID on pages 405–409.


OFFICE
OFFICE
bridge over
main stair
SHOWROOM
first floor plan


WELLS MEWS
LORRY DOCK
ramp to basement
ramp to basement
main stair
FABRIC TRADE SHOWROOM
LOBBY
POOL
TRADE COUNTER
display counter
display counter
BERNERS STREET
ground floor plan (Scale: 1/64 in. = 1 ft.)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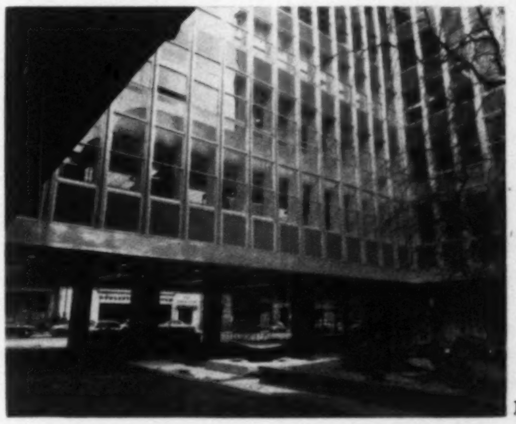
8, the front elevation in Berners Street.
9, the pool in the internal courtyard, with the first floor showroom above.
10, view from courtyard, looking out into Berners Street.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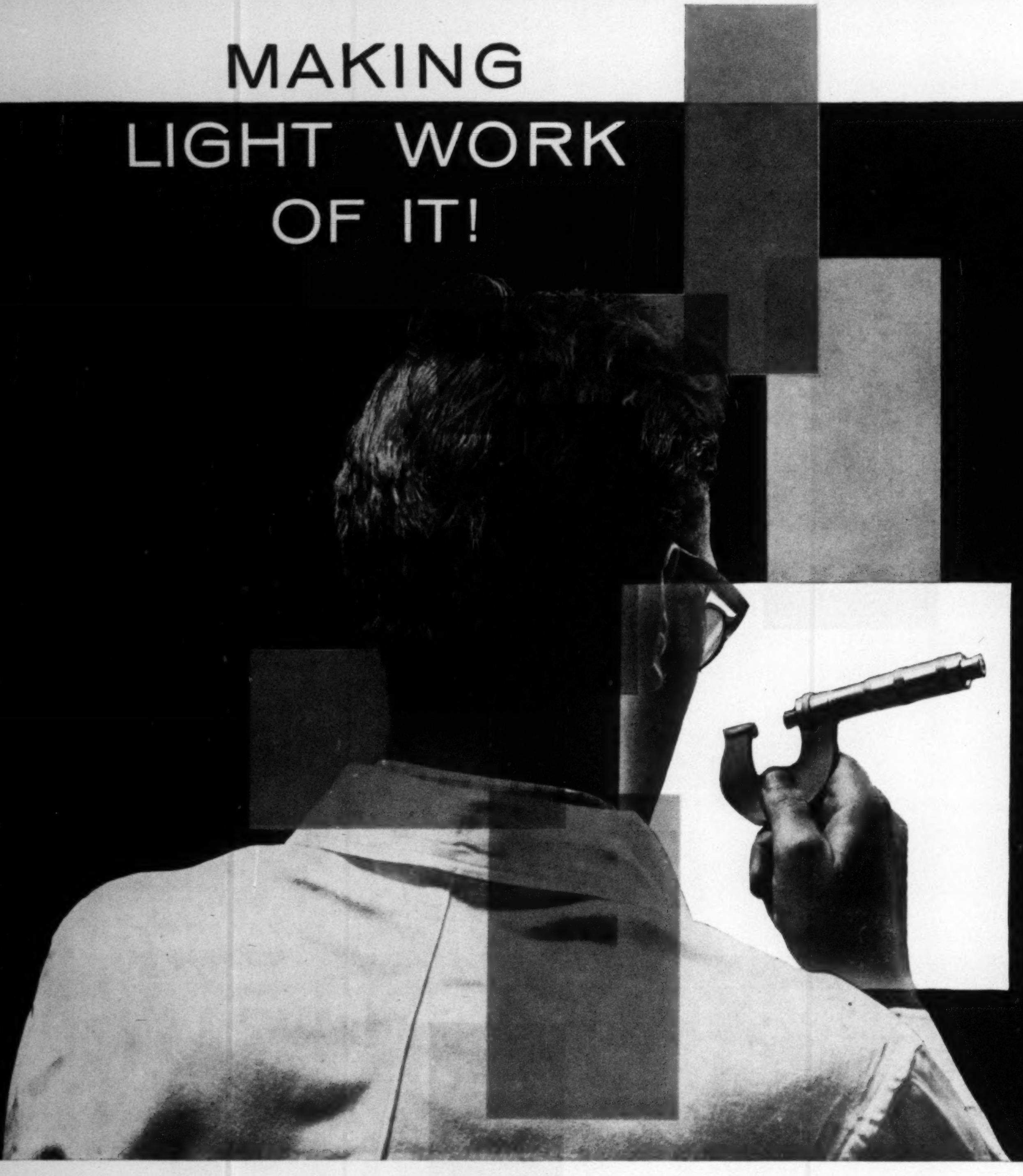
MAKING LIGHT WORK OF IT!



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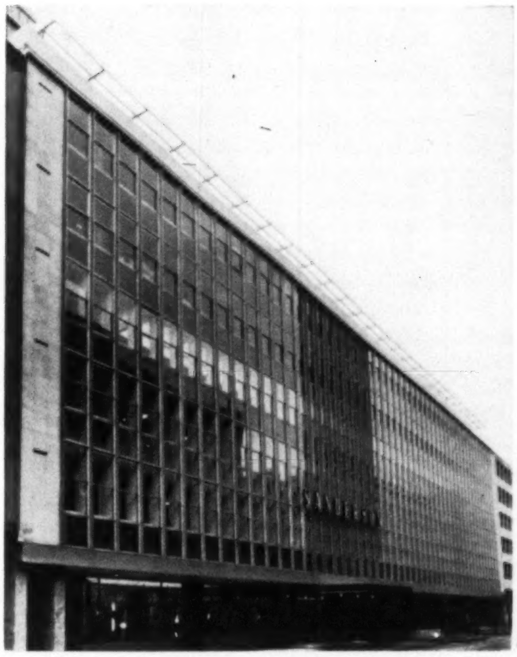
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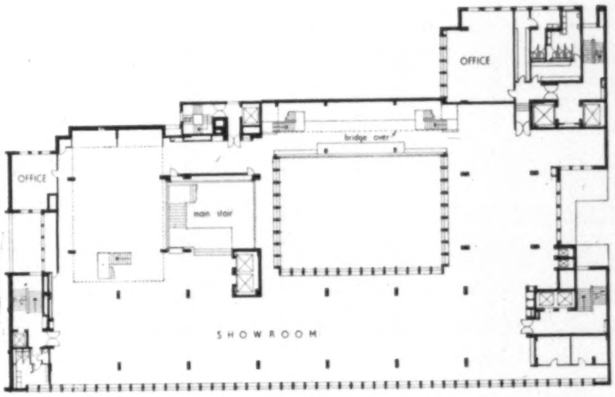
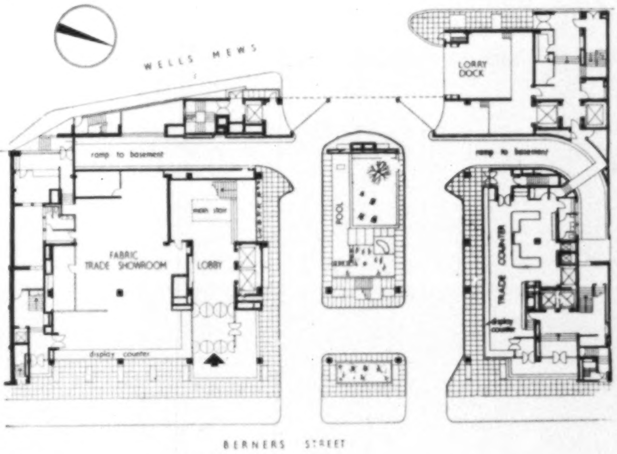

OFFICE
OFFICE
bridge over
main stair
SHOWROOM

first floor plan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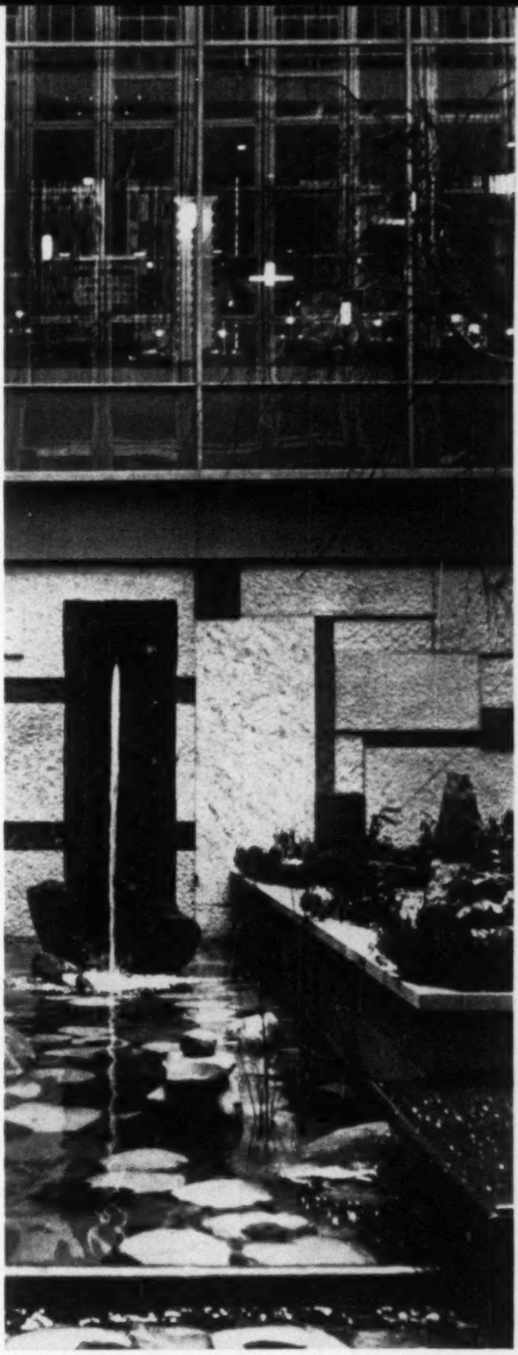
9

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9, the pool in the internal courtyard, with the first floor showroom above.
10, view from courtyard, looking out into Berners Street.

10

The name miscellany implies, of course, an architectural miscellany—one that will include subjects which though marginal to architecture, are nevertheless vital to it.

miscellany

EXHIBITIONS

PAINTINGS & SCULPTURE

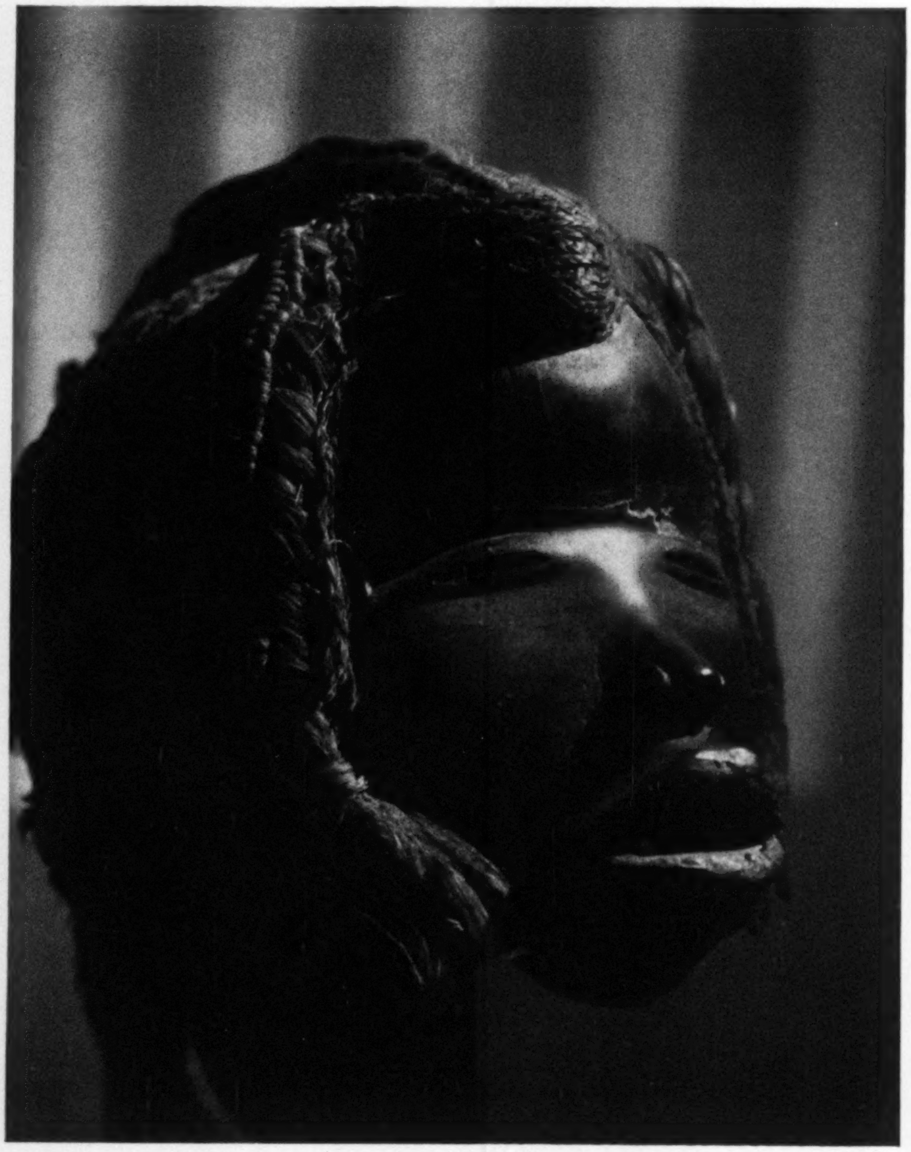
I respect William Fagg's expert knowledge of African tribal art, but I am puzzled by his attempt to use Epstein's collection of tribal and archaic sculpture as a weapon against some of the best artists of our time, and I am surprised that Basil Taylor should have followed his lead.

William Fagg says in his introduction to the catalogue of the Arts Council exhibition that the collection has been put on view primarily as 'a comment on the little understood relationship between so-called "primitive" art and that of twentieth-century Europe,' but I don't see how he can expect members of the public to obtain a better understanding of the relationship simply by showing them examples of one side of it. His tendentious remarks on the subject were a pretty poor substitute for a comparative group of twentieth-century European works.

One of his statements, reflecting on the collection itself, seems to me to be a choice example of the professional in action against the amateur: 'the desire,' he writes, 'to represent adequately the balance and intensity of Epstein's interests has often been allowed to override considerations of ethnographical purism, which would carry greater weight in an exhibition of tribal art *per se*.' On a first reading, I thought that this was a fancy way of saying that some of the exhibits were fakes, but he says later on that 'a few pieces aroused enough doubt to lead to their exclusion,' and as this presumably means that the fakes were weeded out, I can't imagine what the first statement might mean. Is he saying that because some of the items are much less fine than others that the collection is not 'ethnographically pure'? I don't think he can mean anything quite as ridiculous as that. Perhaps such terms as 'unidentified tribe' and 'no obvious stylistic features' which appear in the catalogue are code-words for 'probably not genuine.' If so, why should works of doubtful authenticity help us to arrive at a better understanding of the relationship between tribal art and the art of twentieth-century Europe? And if, as he contends, Epstein apprehended 'the real nature of tribal sculpture more profoundly perhaps than any other artist of our time,' was his understanding intensified by these doubtful or 'impure' works?

With regard to Fagg's contention that Epstein made better use of his appreciation of tribal art than 'perhaps any other twentieth-century artist,' Basil Taylor, in his review of the show, reads into it exactly what Fagg would like everyone to read into it, and agrees that apart from Epstein, who used the qualities of tribal art 'sensibly,' whatever that may mean, 'the kind of twentieth-century art modelled most immediately upon them and which made them accessible to the modern spectator cannot match them in expression or presence.' This, if I may say so, puts Basil Taylor in a very curious position, for he is saying, in effect, that Epstein is a greater artist than Picasso. He knows better than this, and I'm sorry that he has allowed himself to be jockeyed into such a position by an ethnographical purist.

If there is a special point to be made about the Epstein collection it is that when a creative artist turns collector he is in a somewhat stronger position than the wealthy amateur or the average museum official to rely on his personal judgment, and Fagg seems to be endorsing this view when he says that 'in general it must be said that a great sculptor's appreciation of artistic sincerity in the work of others has in this case proved an almost unerring guide,' and I can well believe his declaration that the group of Fang heads and figures is the most important in the world. It was exciting to see the range of variations achieved by the carvers within a convention rigid enough to have led to monotony in less warm and inventive hands. Each piece seems to add to the force of the convention, and although there were some larger and more dominating pieces from other tribes, including one



1

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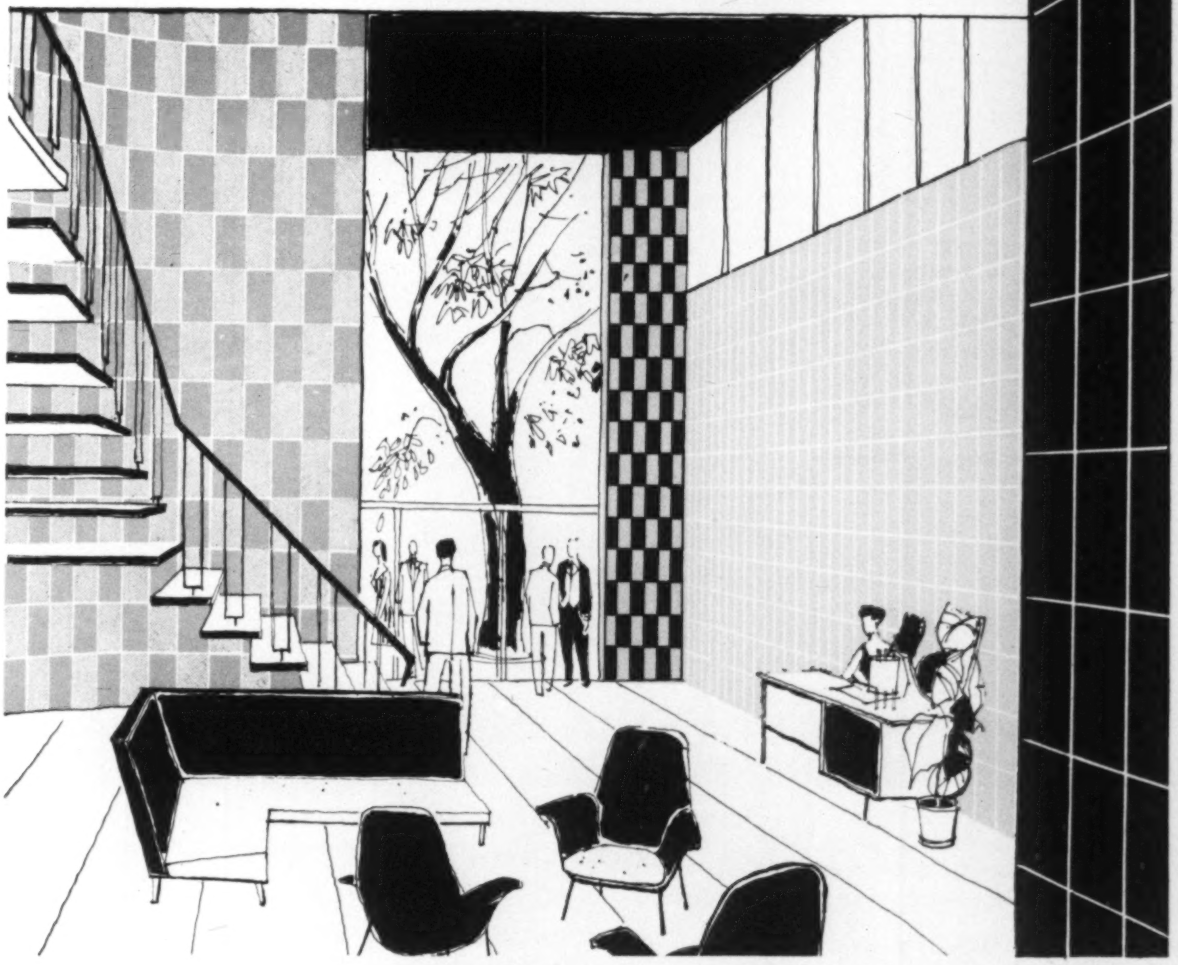

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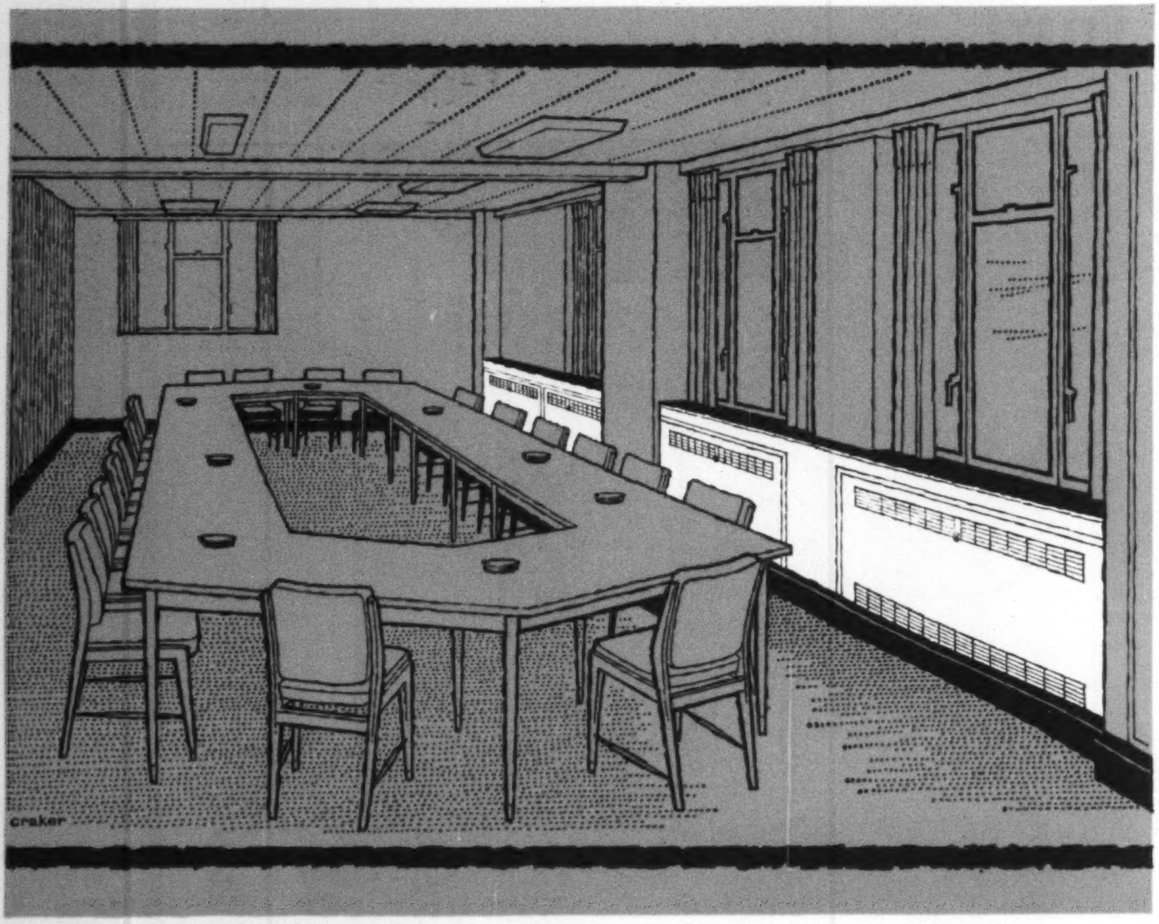

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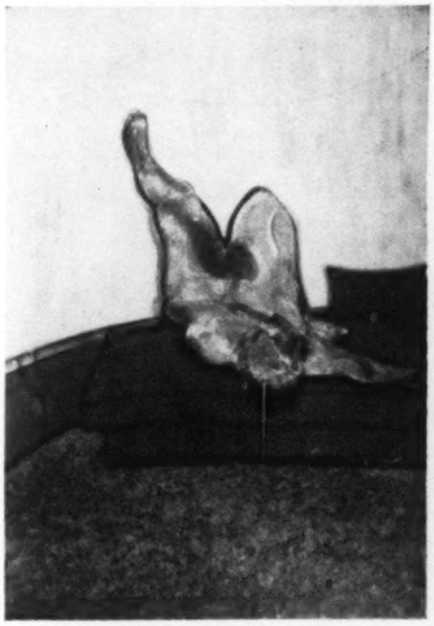
of the huge Baga dance masks with the beautiful and demonstrative 'nose of increase,' the Fang pieces generated more power as a group than any other section of the show.

The Dan mask illustrated here, 1, is so near to being a portrait that I have the feeling that I've seen the girl herself somewhere. It made a striking contrast to the masks of the neighbouring Ngere tribe whose more radical abstractions summon up fierce and sinister presences. But no doubt I would realize that they are not in the least fierce or sinister if I knew more about them, so I had better move on.

But to move on to the exhibition of recent paintings by Francis Bacon at the Marlborough Gallery is to get on to more familiar but far from safer ground. There is something of the early Munch in Bacon's new paintings, but it's hard to pin down what it is. Partly, I think, it's to do with the slippery, ectoplasmic treatment of the flesh in some of his figures (where the paint seems, in a creepy, unimaginable sort of way to issue from the body it is forming), and partly with the reduction of the figure to a kind of ***Jugendstil*** silhouette, complicated in Bacon's case by its application to foreshortened figures and to figures only partly in view, which gives them the look of mishandled materializations. But probably the sense of a relationship to Munch is mainly due to the meaning of Bacon's imagery, which is as obviously concerned with sexual disturbance as Munch's studies of puberty and adolescence. But whereas Munch dealt with the oncoming of virility, passionate intercourse between the sexes and the conflict between shame and desire, Bacon is concerned with the play of an anarchic, aimless genitality upon the human condition, and if there is conflict in his paintings it is a conflict between two physical states, between exhaustion and galvanization, between a loosening and tightening of tension, in a single figure.

It is now apparent that his paraphrases of Van Gogh's ***On the Road to Tarascon*** were more an interlude than a development and that the 'figure in a landscape' was a departure from his main theme, which might be described as 'the performer in a secret arena.' It's possibly due to the influence of Van Gogh's sunlit landscape that the arena is no longer in semi-darkness, but if so, the sunlight has been transformed into a harsh electric glare, and the streaks of red and green in his expressionistic treatment of Van Gogh's landscape have now turned into flat bright areas of crimson carpet and billiard-table green wall.

Like the can-can, the paintings of nudes lying on couches with one leg up the wall, 2, are designed to draw attention to the fork of the human body, and when they were on exhibition they provided the ceremonial aspect of a grand re-union of the creatures of Eros, which included a sprinkling of popes and business men and many reclining and seated figures, clothed and unclothed, grinning or shouting, for whom the artist risked a charge of incompetence in order to give them the appearance of leaping across the room, as if at one and the same time they were both couchant and rampant.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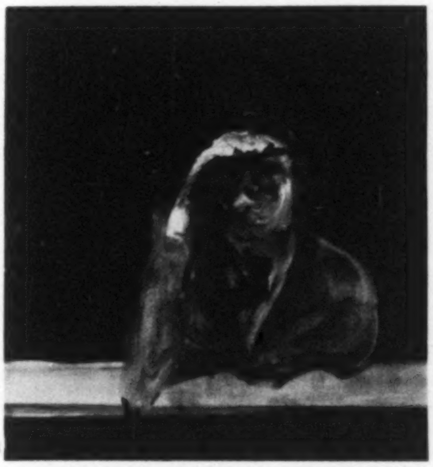
The smaller paintings of heads operated as formal portraits of the performers, and their faces, 3, ravaged by a melancholy as distorting as the grins and the equivocal acrobatics, presented them, so to speak, at their most presentable.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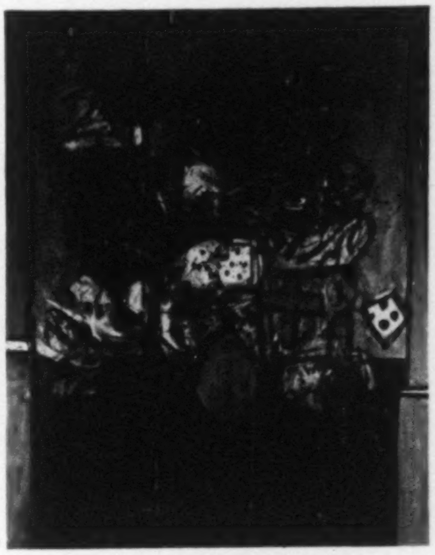
At the exhibition of Alan Davie's recent paintings at Gimpels it occurred to me that if Bacon were to depict one of his nudes in the act of painting a picture, the picture might well bear a resemblance to Davie's work. There was no indication that Davie is thinking of giving up the voluptuous pleasure of debasing the emblem. It gives his paint something to do. In 'The Monk's Vision,' 4, he would seem almost to have thought of the title first and been tempted to illustrate it, for it contains a remote resemblance to a Christmas tree decorated with hearts, crescents, crosses and playing cards, and in the circumstances he would have done better to suppress the title, for it underlined the commonplaceness and pretentiousness than can accompany a remarkable talent for applying paint to canvas. He uses his canvases as sub-metaphysical fly-papers for catching his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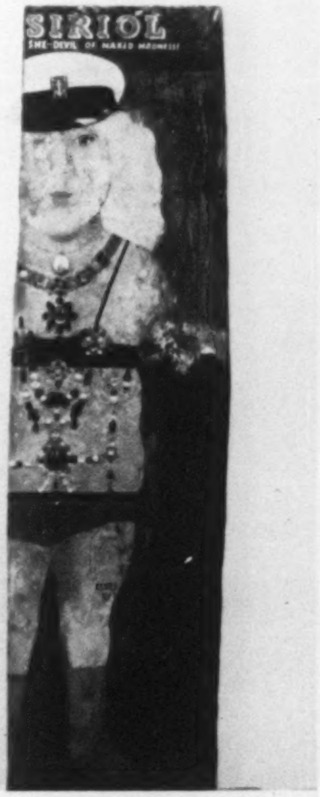
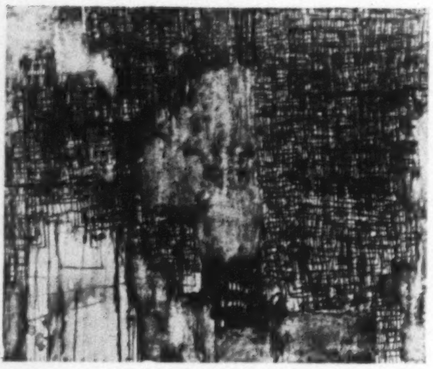


5

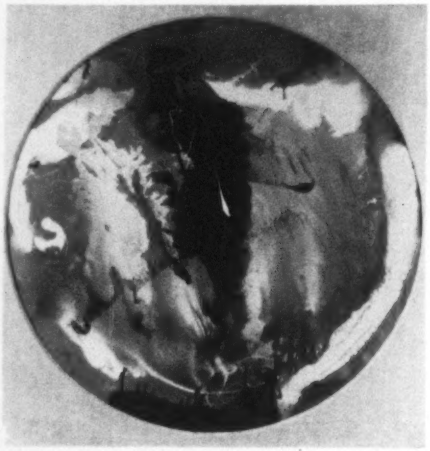
own floating thought-oddments. At his curious best, he can give simple signs and devices a fat, maggoty look and set them creeping and crawling, but he was not quite at his best in his latest show.

Peter Blake, working unpretentiously upon the commonplace, rediscovers the poetry of signs and emblems on the tunics of drum majorettes and the lapels of small boys. He seems to me to have a more decent and adult attitude to the vulgarization of values than those other young men who accompany their all-too-free abstracts with statements about their allegiance to the mass media and every kind of pop, which are intended to emphasize their superiority and 'difference.' Peter Blake, in his paintings of tinselled fair-ground performers, 5, and young people who bedeck themselves with all the badges they can collect, is out to confirm the surrealists' belief that poetry can be made by all. His show at the recently opened Portal Gallery was a small retrospective, and at his best he is able to add ready-made material to his paintings in an enchantingly humorous way.

There was a pleasant lightness of colour about most of the exhibits in the Redfern Gallery's group showing of twelve Greek painters, but no outstandingly good or original work. Most of the landscapes lost their identity under a veil of tachisme. The abstract decorations of Nicholas Georgiadis were among the most charming things in the show, but according to the titles he too is concerned with landscape, and the typical example of his work illustrated here, 6, is called 'Inland Harbour.'


6

Paul Jenkins brings to its final polish the art—or should I say 'craft'?—of abstract texturing produced by the controlled precipitation of wet paint. There is no doubt about his virtuosity nor, if we may go by such titles as 'Moon of the Falling Fish,' 'Eyes of the Dove' and so on, his poetic intentions. But the effects of gaseous phenomena and vast explosions occurring in an outer-space dreamland are spoilt by the fact that the pretty vapours and sheets of flame lie still and inert on the canvas; but things like his circular 'Firehoop,' 7, should have an immediate appeal for interior decorators.


7

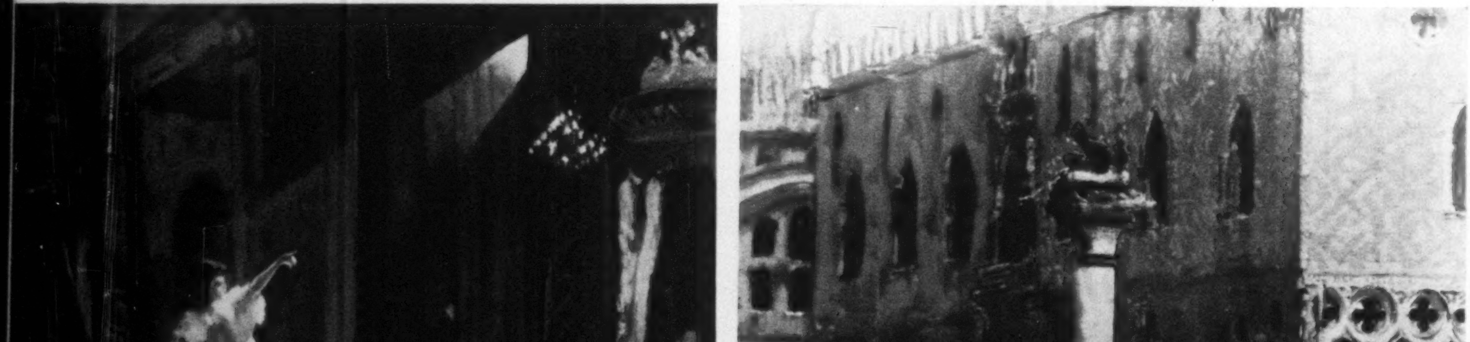
I propose to reserve comment on the exhibitions which celebrate the centenary of Sickert's birth until I have seen the major retrospective at the Tate. Meanwhile, I would like to take advantage of the splendid exhibition of moderate-size paintings from private collections held at Agnews, by stiffening up my group of illustrations with the lovable picture of Little Dot Hetherington singing 'The Boy I love is up in the Gallery,' painted in 1889, 8, and the beautiful 'Lion of St. Mark's,' 9, painted six years later.

Robert Melville

OBITUARY

SIR GILES SCOTT

Sir Giles Gilbert Scott, son of George Gilbert Scott and grandson of Sir George Gilbert Scott, died on February 8th this year. Whatever else he may later have designed, he always remained to the British public the man who won the competition for Liverpool Cathedral at the age of twenty-two, so young that Bodley was attached to him as a


8,9

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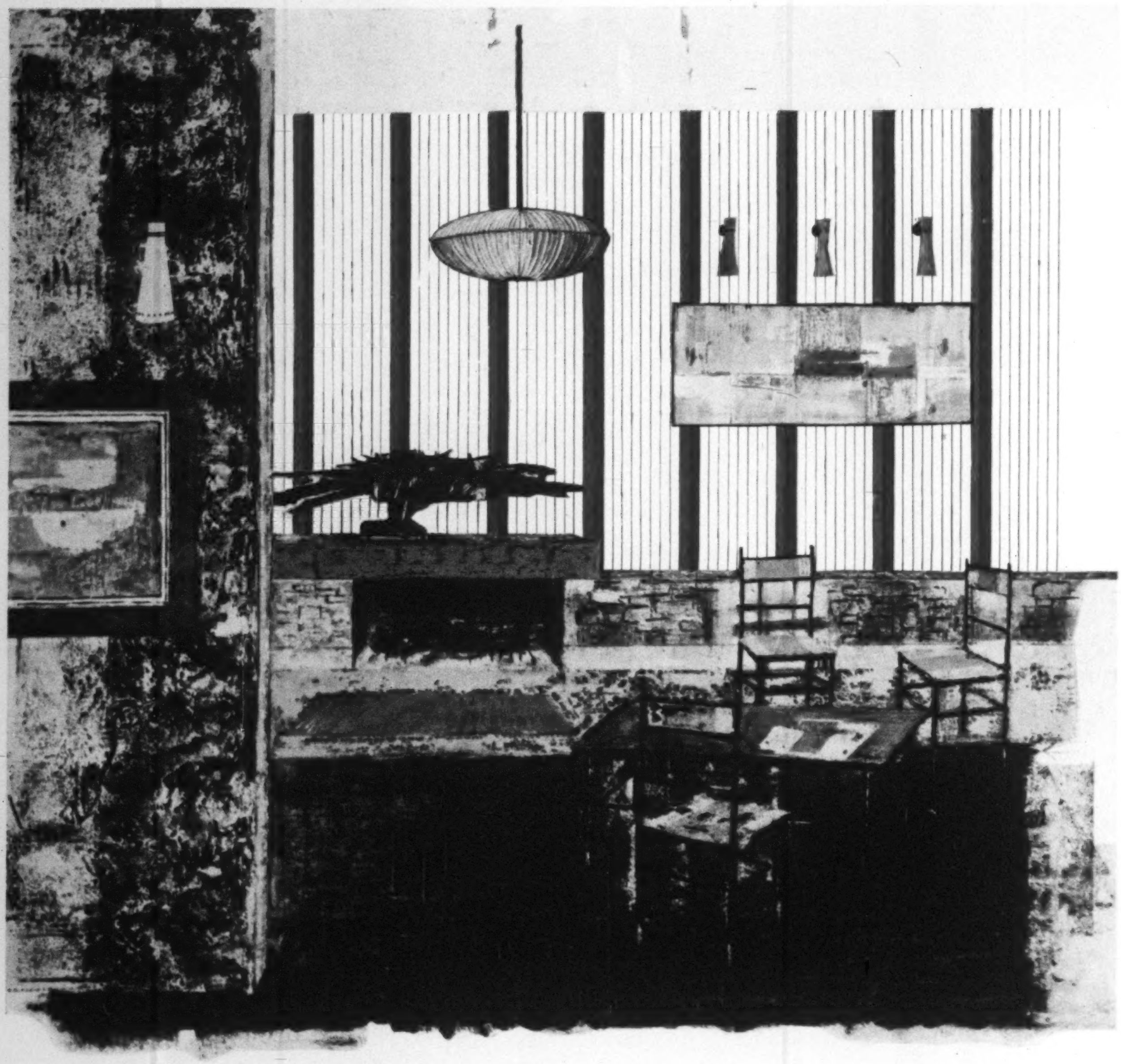

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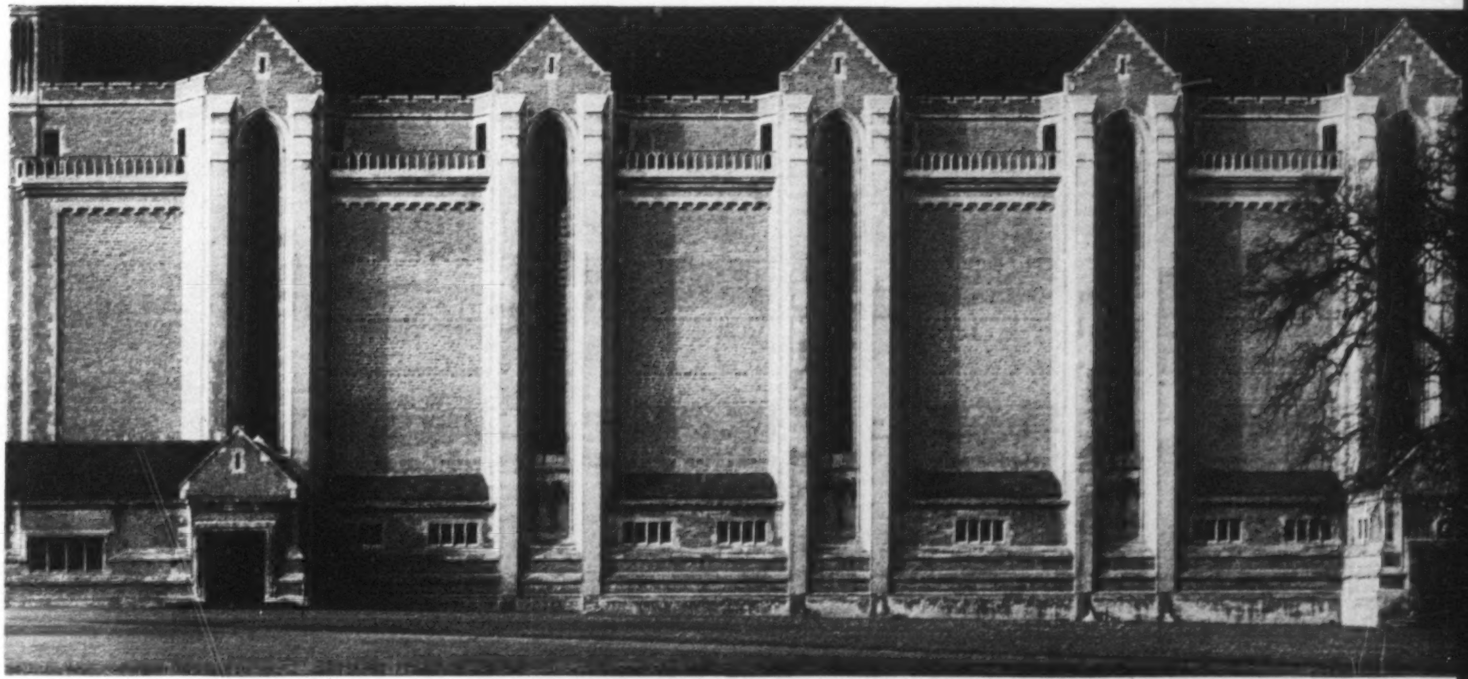


1

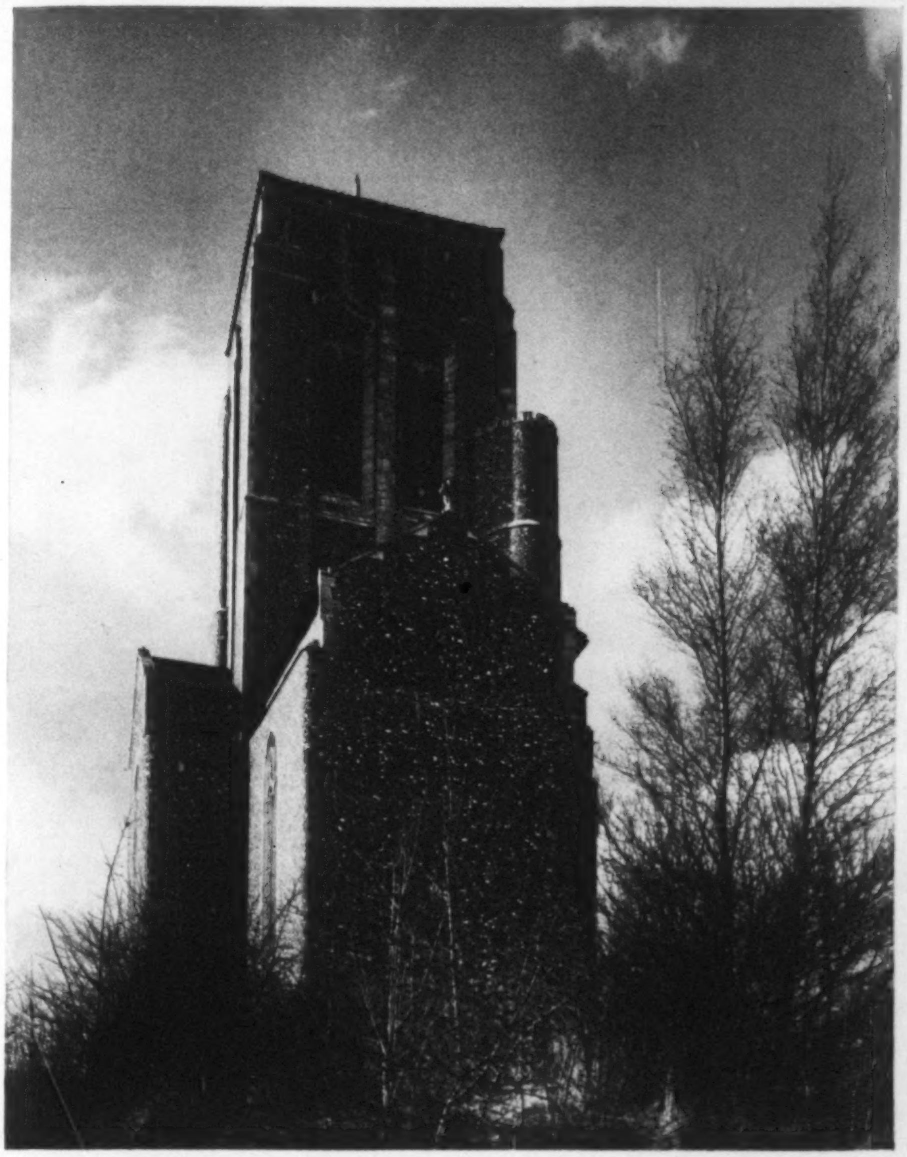
1, *Charterhouse School Chapel.*
2, *Church of St. Francis near High Wycombe.*

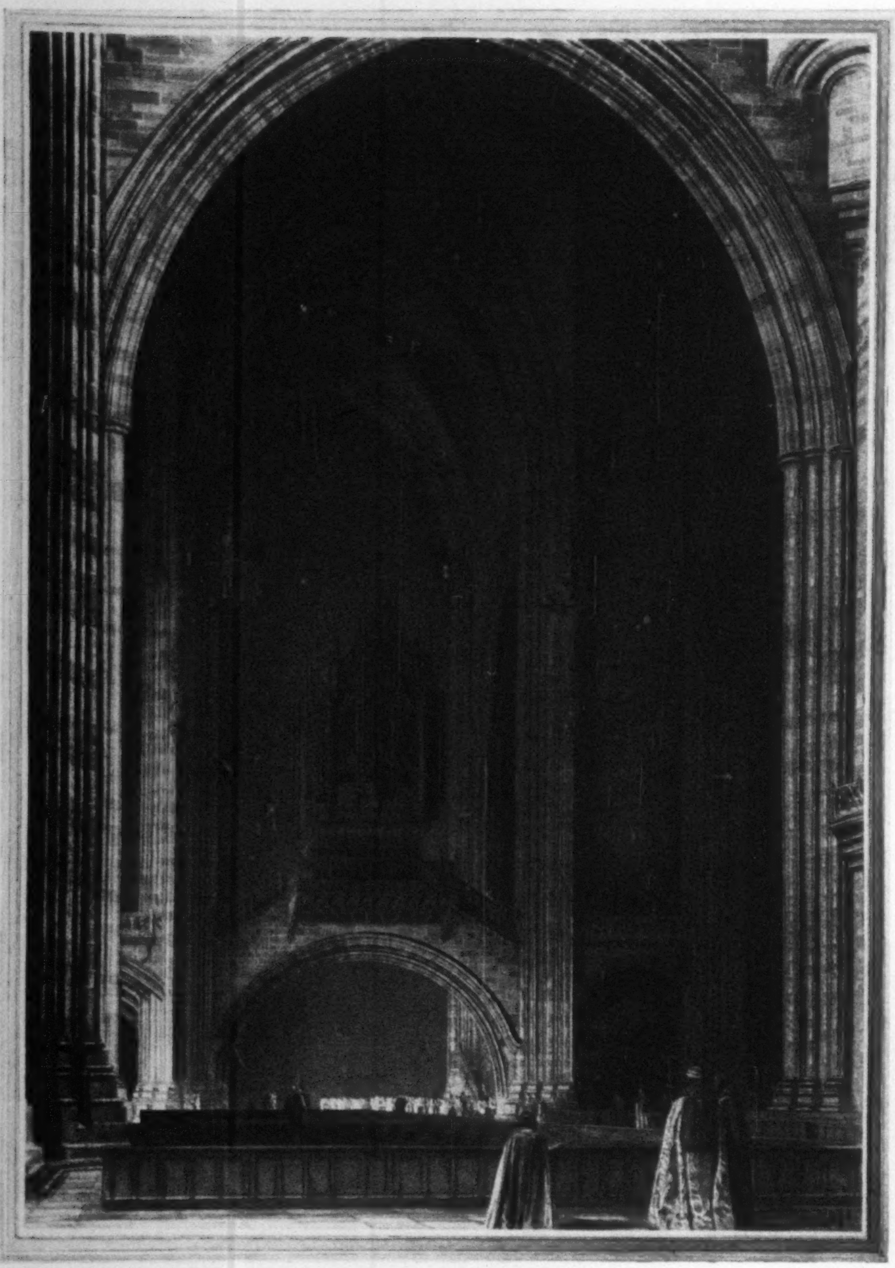
kind of supervisor, an arrangement which came to an end at Bodley's death in 1907.

Liverpool Cathedral, 3, is indeed a prodigious design for so young a man—competent and perfectly confident and at the same time daring in its use of the romantic possibilities of such an exceptional scale. It is recognizable as an early work of Sir Giles Scott's in that its Gothic is handled more historicistically than he did later. But Liverpool Cathedral expresses already what was to be Sir Giles's distinguishing trait among the last generation of historicists and semi-historicists—a sense of thrilling contrasts between exceeding heights and a puny human size, contrasts developed from Piranesi rather than the Scotts of the nineteenth century and paralleled in Fred Griggs's never-built architectures and in some of Lutyens's palaces and castles.

It is this trait that makes Scott's best buildings memorable, buildings such as the Charterhouse Chapel outside Godalming (of 1922), 1. Very tall proportions, sheer walls, immensely high, immensely narrow windows, dramatic, unexpected lighting—such are the effects one ought to look for. They are by no means most conspicuous in his more familiar works. On the contrary; Sir Giles Scott is, unfortunately, remembered primarily by buildings lacking in these qualities, and the unevenness of his modes of expression will always remain baffling. The Cambridge University Library of 1933, the Bodleian of 1935, the remodelling of the House of Commons, the recent office building for the City behind the Guildhall—they are all accommodating

2





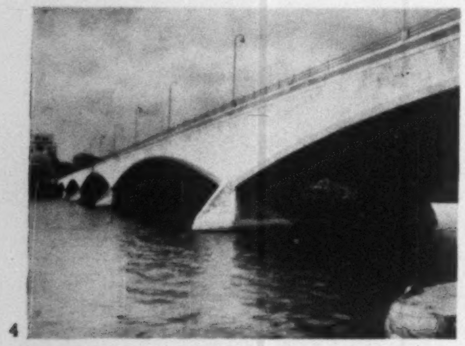
3

3, the nave of Liverpool Cathedral.
4, Waterloo Bridge.

and *juste milieu,* whereas such a church as, for instance, St. Francis Terriers outside High Wycombe, 2, is not.

But Sir Giles's possibilities ranged yet wider, and Waterloo Bridge, 4, seems to fit into neither of the two categories so far demonstrated. The elegance and simplicity of the lines of the bridge which, against all expectations, turned out to be a worthy twentieth-century successor to Rennie's nineteenth-century masterpiece, were almost as much a surprise when they were first illustrated just before the war, as had been the designs for the Battersea Power Station nearly ten years earlier. Battersea was in fact one of the first industrial buildings in England that can be seen as belonging to the twentieth century. It created a style for brick-built power stations recognizable all over the country, and Sir Giles, a modest, entirely unpompous man, was proud of this unforeseeable result of his care for the fitting appearance of an exceptional job.

N. Pevsner



4

TOWNSCAPE

TERRORS OF TAMENESS

An appreciation of the charms of rusticity is part of the heritage we owe to the Picturesque. The tragedy is that conscious attempts to achieve rusticity are so often ruined by trying to achieve something else that just won't mix with it, at the same time.

Even those who, like J. T. Smith, are 'by no means *cottage-mad*' and are 'content that rural and cottage-scenery shall be considered as no more than a sort of *low-comedy* landscape'[1] will be able to enjoy the complete harmony of the scene in the first photograph: cottage, wall of boulders, rough grass verge—there isn't a single false note. Now look at the second photograph. It was taken in the same locality, in North Wales, and the main components of the scene are identical. Yet what a change is here! It isn't so much the fact that the new cottages are inferior as architecture. (On this subject one may note that the eighteenth-century one in

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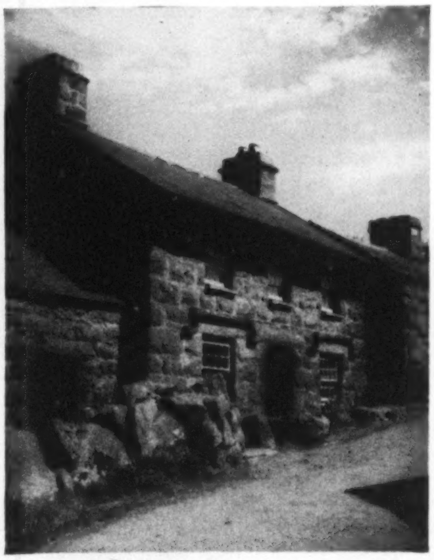
[1] *Remarks on Rural Scenery,* 1797; quoted by John Piper AR, September 1947, p. 88.



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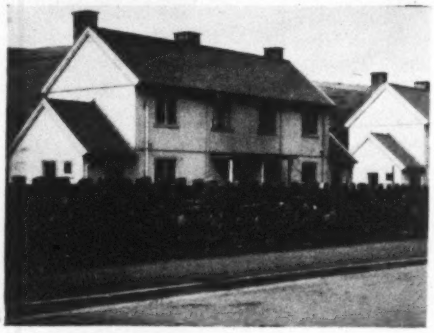

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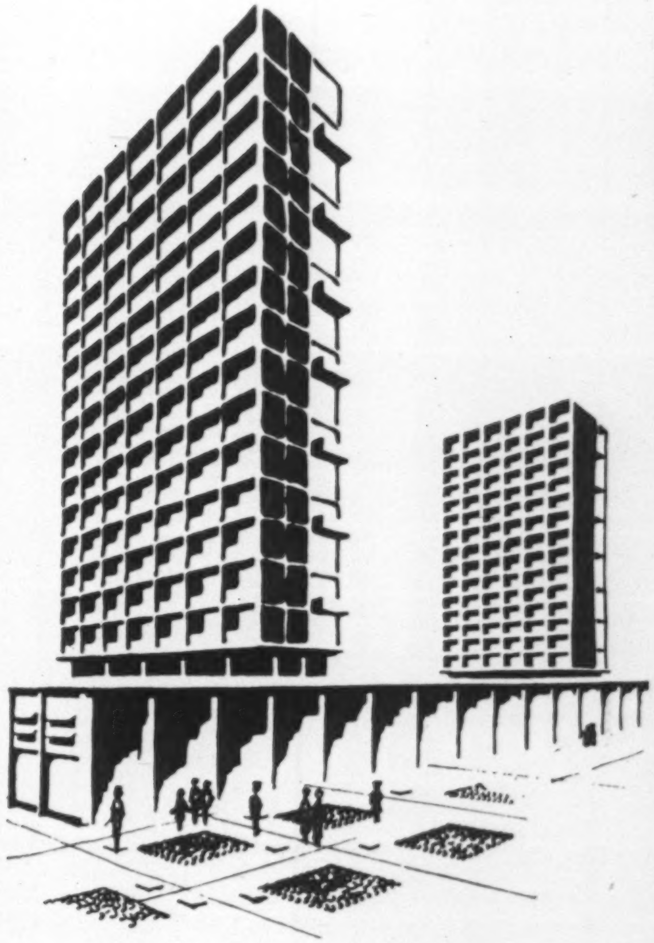

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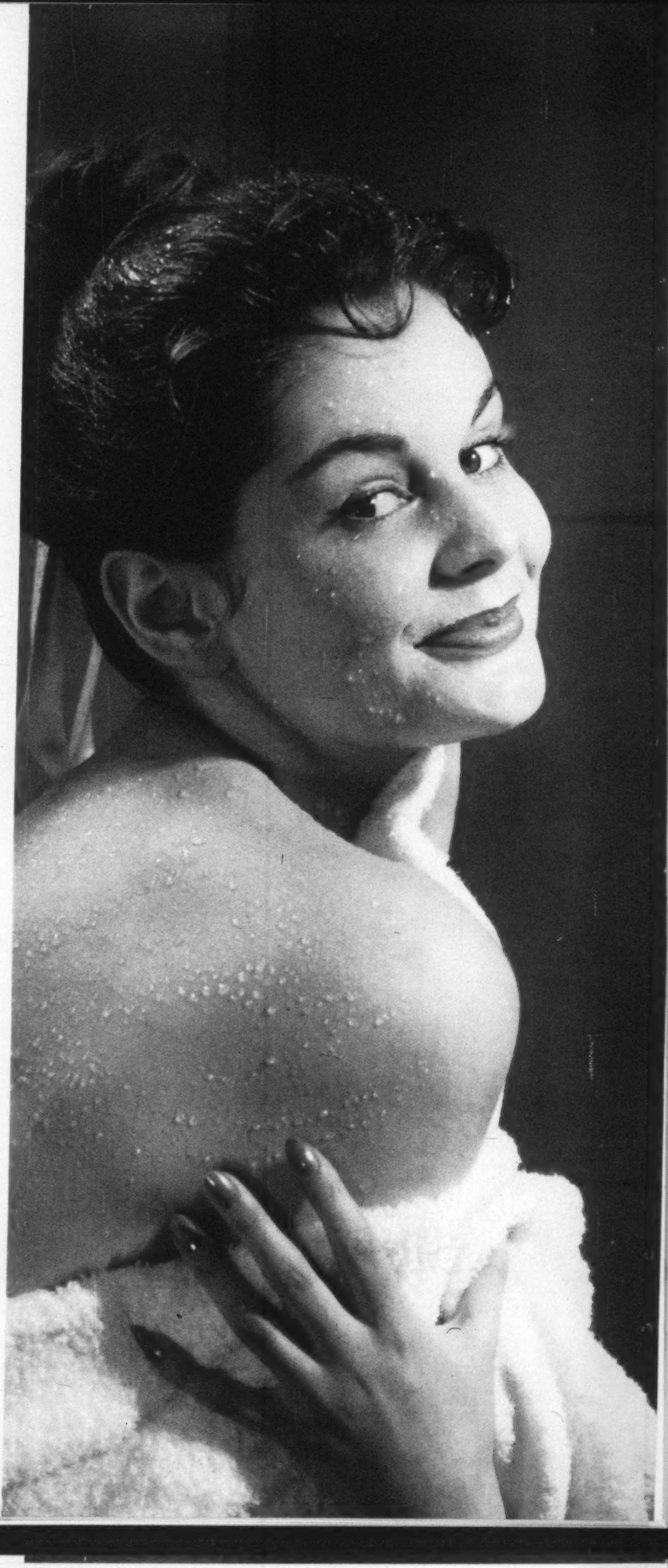


the first photograph, though humble enough, was in the up-to-date idiom of its day so far as general design was concerned, even if its builder sensibly considered himself at liberty to retain a functional feature from an earlier age in the Tudor drip-moulds over the windows; those in the second, on the other hand, are what is called 'traditional', which may be translated as *un-twentieth-century*, in general form, with an up-to-date though not particularly functional *cliché* in the design of the porch.) The trouble lies rather in the fact that the scene has no consistent character; somehow it manages to be neither rural, nor urban, nor even suburban; everything in it seems bent on contradicting, on showing up, everything else. How should that have come about? The short answer, of course, is that it has been no one's business to see that it has a consistent character. But it is important to notice that the kind of contradiction that is so obvious in the scene as a whole is also found in its individual elements. And most conspicuously in the wall. 'Stone is plentiful in these parts,' someone says, 'so let us have a stone wall.' Well and good. But having decided upon a stone wall, you must decide upon the character appropriate to it, and carry the thing through to the end with that character in your mind's eye. What has happened here is that a technique lending itself to the character of rusticity has been chosen—and then it has been decided that the wall must be neat, or whatever the word may be, as well; and that vicious eye-irritant in the shape of a quasi-battlemented coping is the result.

Rusticity and neatness, formality and informality—attempts to reconcile irreconcilables such as these are the cause of the failure of so much of what is done in the name of improvement today. The irony of it is that it is really so much easier, as well as so much better, to aim at one effect at a time.

M.W.

TRAVEL

PALAZZO MALASPINA AT ASCOLI PICENO

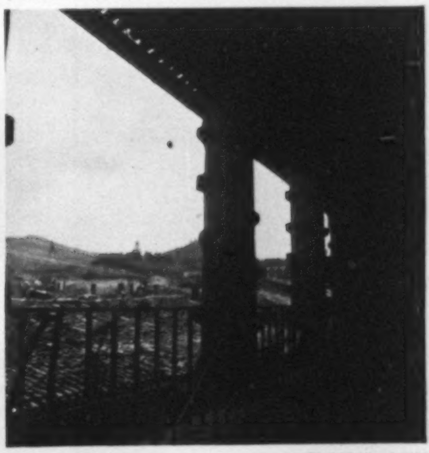
The Renaissance palace of the Malaspina in Ascoli Piceno, which is attributed to Cola dell'Amatrice, has what is probably the most original loggia of any palace of its kind: the columns are made in the form of thorny tree-trunks, clearly a borrowing from Bramante's colonnade of the Canonica of S. Ambrogio at Milan, 1. There was considerable argument among the local inhabitants when I asked at what time of day the sun fell upon the columns of the loggia, as I wanted to photograph it and had only one free day in Ascoli.

Finally I was reduced to going to the palace the evening before and climbing up to the top storey to ask the tenants of the flats (into which the palace is now divided) when the sun fell upon their loggia. The reply was, 'At this time of year (mid-May) and in the summer, never; but in the winter when the sun is low on the horizon, the loggia is full of sun.'

The overhang of the roof is so wide and pitched at such an angle as to prevent the high sun of summer from entering it, 2, 3. This is rapidly becoming a commonplace of modern architecture, but it is interesting to note that Italian Renaissance architects, even in the remote Marche, made use of this particular structural device, in a town which is cold in winter and hot in summer.

Georgina Masson

1, the colonnade of the Canonica of S. Ambrogio at Milan, 2, the interior of the loggia of the Palazzo Malaspina and 3, the exterior of the building, showing the deep shade provided by the eaves.



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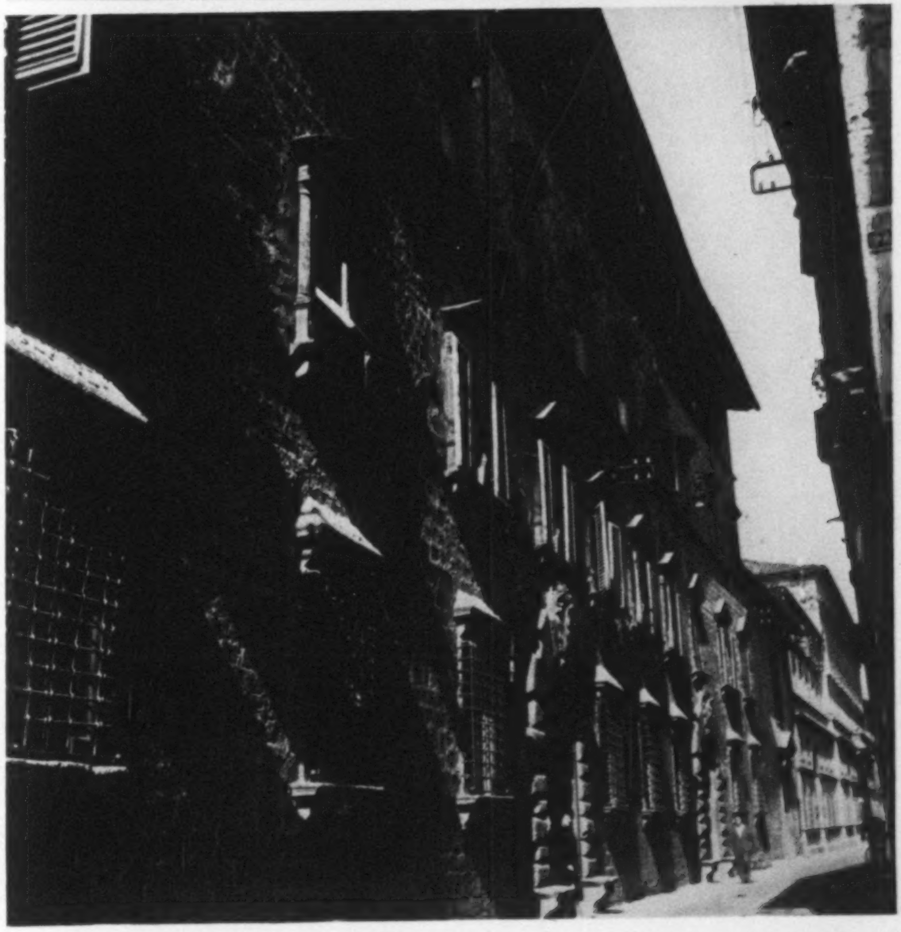

3

SKILL

DESIGNING FLOORS FOR CLEANING

by Lance Wright

It is a truism to say that as labour becomes more expensive, maintenance counts for more in design. Particularly is this true of commercial type buildings where the intensity of use is very great. In an earlier article we have discussed the cleaning of the outsides of tall buildings: in this one we consider floors.*

Broadly speaking, there are two methods of off-setting the high cost of floor cleaning. One is to use some form of seal which will make cleaning less arduous and less frequent. The other is to use a machine.

Machines versus Floor Seals

One very large firm of office cleaners consulted on this point said that they were opposed to the use of machines for routine cleaning. The reason given was that, when the machines went wrong, it was a difficult matter to get them mended and much time was lost. This argument might not apply where a firm does their own cleaning and where repair staff are constantly at hand. Another objection against commercial type equipment is that it is difficult to control in narrow spaces and can easily mark skirtings and door jambs. To some extent this is a defect which can be overcome in design by using skirting materials which are easily cleaned, such as melamine plastic. Also there are certain floor cleaning jobs which can only be done by machine. The same firm of office cleaners invariably make use of machines for removing the build up of wax at the beginning of a cleaning contract. Machines are also at a premium in hospitals, where the mop is suspect as a cause of cross infection; and there is no doubt that, for the organization which does its own cleaning, recruitment is easier if machines are used.

Slipperiness

If the defect of heavy cleaning bills is one which will only become apparent in course of time, that of slipperiness is noted at once. It is reported that the wood floors of one large new London office block were found to be so slippery (a Director fell down three times in a matter of weeks) that all had to be sanded. The main cause of slipperiness is wax left on the surface and both of the new approaches to floor cleaning tend to diminish it: machines, by burnishing the floor and forcing the wax below the surface, seals by making waxing unnecessary. Even if wax is of no danger on any particular floor, it may still be carried about on people's heels. It is particularly dangerous where floor surfaces change, as, for instance, where a wood floor adjoins a terrazzo staircase. One solution to this problem is to lay a rubber mat on each landing. This has the double effect of forcing people to brake before passing on to the different surface and of removing a certain amount of wax at the same time. For this reason, the door mat at the entrance to a building has a more important functional purpose than is commonly realized. Except in wet weather few people go through the ritual of solemnly wiping their feet and for this reason mats should extend six or seven feet in the direction of travel so that those coming in are bound to place both feet on them in the course of walking through. One type used at the headquarters of a firm of office cleaners uses three separate mats in the direction of travel so that the mats can be changed round every now and then and uneven wear prevented.

Floor Sealers

The favourite finish of the flooring contractor is button polish and wax, for this gives the floor a formidable initial appearance and hides all defects. Unfortunately it is at once exceedingly slippery and exceedingly hard to maintain. The alternative is to use a floor seal. Flooring contractors do not like seals because these show surface defects; also, of course, they are expensive, particularly where applied to relatively porous surfaces. Nevertheless, as has already been said, seals have the dual advantage of reducing cleaning and of reducing slipperiness. At the present time the Timber Development Association is testing different proprietary makes in an existing office building. One interim report† has been issued which lists no less than 60 different makes. While awaiting the final report a number of points can be made. The first is that no seal lasts for ever. TDA consider that their life depends partly on composition, partly on thickness. Other factors being equal, a two-coat seal will be better than one coat and it is calculated that a busy office corridor treated with two coats should be renewed once a year. One of the problems of sealers is that those which last the longest (i.e. the 'two-can' urea-formaldehydes) may prove the most troublesome to renew. Floors treated with sealers need only to be 'run over' with a damp mop. They can, indeed, be waxed, but this treatment, though giving them an almost indefinite life, deprives them of their two chief advantages. Lastly there are two types of floor which cannot be sealed: thermoplastic and rubber.

Mechanized Floor Cleaning

Mechanized floor cleaning is closely analogous to grass cutting by motor mower in that both favour the large uninterrupted, undifferentiated, area and that both run into difficulties at right-angled corners.

This article is concerned only with commercial type buildings and for these only commercial type equipment should be used. The difference between commercial and domestic equipment is clear cut and depends on the kind of electric motor. A domestic machine ('vacuum cleaner') does not have a continuous rating: its efficiency falls off quite sharply after it has been running from five to ten minutes on end. This does not matter in a house room since use is always intermittent. The commercial type machine, on the other hand, has a continuous rating and can go for long periods without any drop in efficiency. This differentiation is also reflected in the industry, for there seems to be an unofficial agreement whereby no firm manufacturing one type of equipment manufactures the other also.

Commercial polishers cost between £40 and £100; and £20 must be added to these figures if the machine is to be used for scrubbing also: commercial driers cost about £80. The decision to use these rather than the much less expensive domestic equipment will turn not so much on the areas to be cleaned as on the intensity of use. In normal surroundings the amount of cleaning necessary is in direct proportion to the number of people using a building and the number of hours per day they are in it; and in all commercial type buildings (shops, office, factories, etc.) this is so much greater than in houses as to create an entirely different problem.

The use of commercial type machines creates a number of physical problems which affect design. The first and most obvious is that of corners. No machine can get into a corner; which means that the little triangle of space where the machine cannot reach must be cleaned (if it *is* cleaned) by hand. This is of no great account in an ordinary room (there is no acceptable architectural recipe for getting rid of corners altogether); but it does furnish a motive for not having unnecessary recesses on plan at floor level (e.g. underneath windows).

Another problem is that of getting equipment underneath fixed furniture and any projections standing out from the wall. This is particularly troublesome where floors are to be washed and must, therefore, be dried; for the drying machine, as it contains a vertical tank, may need a clearance of as much as 2 ft. 6 in. Projections in this case should not be lower than three feet. Polishing and scrubbing equipment is much shallower. One type which is driven by belt can get under shallow projections which are as little as six inches above floor level. Machines driven by crown and pinion are more common, however, and these need a clearance of at least one foot.

If these are the limitations imposed by machines on plan and section, there remain two extra provisions that must be thought about. The first is power supply. Some large users of electrical equipment (among them British Railways and ICI) insist that the voltage should be stepped down to 50 or 110. For the higher voltages the long trailing flex is unquestionably a source of danger and power points should be provided at not less than 15-yard intervals. The other provision is that of a cupboard in which machines can be stored. An area 4 ft. by 4 ft. on plan is large enough.

Conclusion

It is not necessarily the architect's business to provide the most economical and the safest floor; but it is his business to know, when he is producing a floor which is neither of these, by how much it falls short, and what greater benefit he can show to justify his choice. The cost of a floor should be measured by the year

[continued on page 429

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*The cleaning of High Buildings, April, 1960.

†Floor Seals by V. R. Gray, M.A., Ph.D. published by TDA. 3s. 6d.

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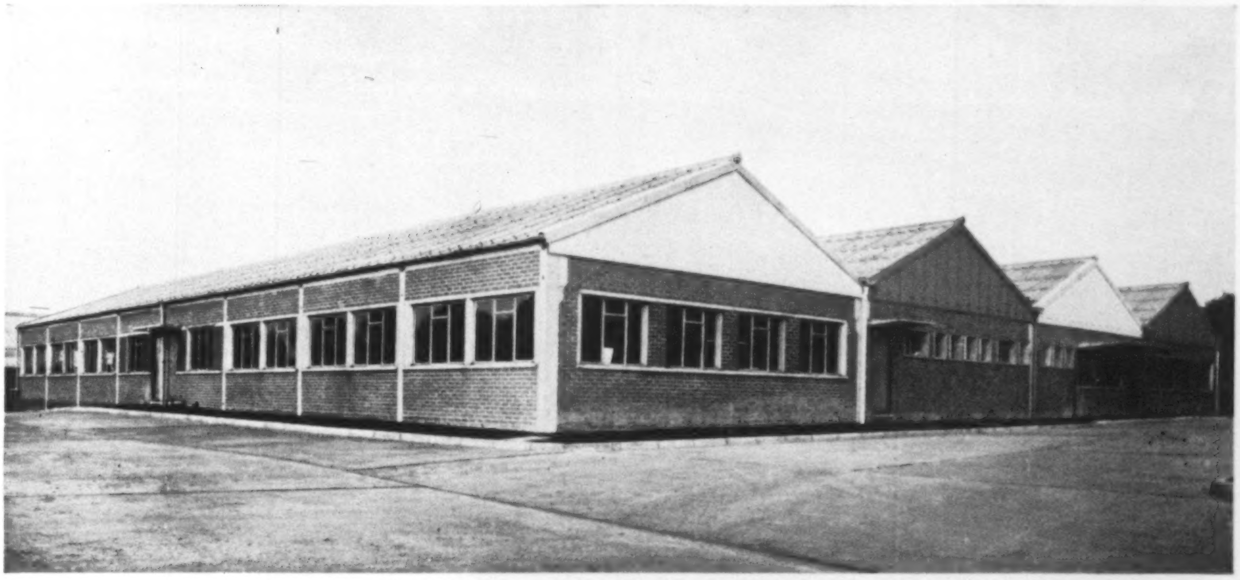

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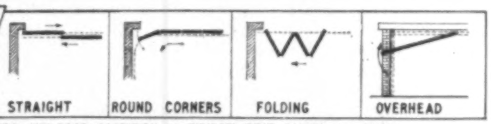

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continued from page 428]

and should consist of the first cost divided by the expected life in years, plus interest on the first cost (usually taken at 5 per cent), plus the annual cost of cleaning. One recent estimate prepared on these lines for the most used areas of a large office building showed that terrazzo was the most economical; that linoleum, the next most economical, cost about twice as much; and that rubber and thermoplastic, which were the most expensive, cost about three times as much as terrazzo.

The detailing of floors for cleaning is a matter which has not received much attention. Of the broad design issues, one which is often missed is the need to avoid placing side by side, in the same space, floors which need a radically different cleaning treatment. The worst case of this is where a floor which must be washed (e.g. stone or terrazzo) is placed alongside a floor which must be sealed or polished.

Of the narrower design issues, what happens at the foot of the wall is by far the most significant. In the early days of the Modern Movement the standard solution, both at the foot of the wall and at corners, was to use a cove. This was completely acceptable hygienically, but less so visually. There is no doubt that an architecture of planes cannot afford the kind of blurring at the edges which a cove gives. Visually, the problem has become more acute in the last twenty years in that our hard, machine finished surfaces cannot stand up to the kind of misfortunes which cleaning brings about. The cleaners' high water line at skirting level on the washed floor, the incursions of polish on vertical paintwork, the black scuff marks from the bumpers of cleaning equipment, all of these are becoming more noticeable. The general answer seems to be to use a dark skirting and, where possible, to recess it as well. The line at which wall and floor meet will always be a line of imperfection and to withdraw it from sight seems a legitimate subterfuge.

The one-foot clearance for the floor polisher may often be acceptable for free standing furniture, but we cannot tell if it will prove the same for projections from the wall. It might be worth while for projecting wall cupboards or lockers, which otherwise add gratuitously to the number of inaccessible corners.

If information on cleaning is still less than is needed for effective design, this is because enough attention has not yet been paid to it. A recent study by R. A. Stone of BRS* showed that maintenance and decoration accounted for 13 per cent of the total cost of office buildings, 'total cost' meaning first cost plus running costs during the expected period of life. Only a part of this is attributable to floors, but it is certainly a significant part. For the architect, however, the motive for giving attention to this is not wholly economic; it is also visual. The fine, hard surfaces of modern building technique are training our eyes to notice surface defects more readily. Also, of course, there is no plethora of mouldings to distract the eye from them. The detail, therefore, which cannot be easily and effectively cleaned will soon become anathema. Apart from this, cleaning policy itself greatly affects appearance: too high a polish on too large an area is just as destructive of visual effect as too little. If the architect wishes to stabilize his visual effects (and which architect doesn't?) he must not only think of cleaning from the start of the design process, but must give his client exact instruction on how to clean on handing over the building.

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*'The economics of building designs' given to the Royal Statistical Society on March 16, 1960.

THE INDUSTRY

Wallpapers on Tottenham Court Road.

The choosing of wallpapers is perhaps one of the most skilled operations in architectural practice: room size, room shape, the direction and quality of light, all of these and many other factors besides, make each room a special case. No conceivable method of wallpaper display can cut out all hazards, but it is encouraging to notice that wallpaper manufacturers are generally setting out to provide more room for seeing papers and wider surfaces for displaying them. John Line's rehabilitated showroom in Tottenham Court Road (architect Jack Dalling) is disappointing as a design (the layout reminds you of its near neighbour, the Building Centre), but the firm continues to turn out a high proportion of the season's good wallpapers and these are much better displayed than before.

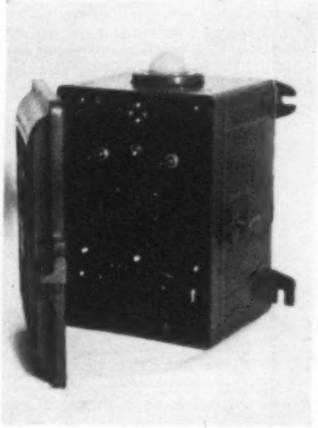
John Line & Sons Ltd., 214 *Tottenham Court Road, London, W.*1. *Museum* 3300.

Automatic switching

The amount of work which does not have to be done by the occupants of a building is increasing with the introduction of more gadgets and automatic controls. A new switch gear, 1, which operates on the level of daylight has been developed by Londex Limited to control lighting or other electrical circuits in factories, railway sidings, loading bays, hotel and theatre foyers.

Components of the gear are mounted on to a printed circuit which is fixed behind the insulated panel in front. The whole unit is mounted in a weatherproof cast iron case. Light falls on to the photocell through the glass dome on top of the casing and will cause the contacts in the unit to operate when the light has decreased to the level set on the controls provided. Similarly when the light improves to the 'lights off' level, the contacts are restored to their original position. The output contacts operate approximately 30 seconds after the pre-set light intensity has been reached. A switch is provided, however, which enables the delay period to be eliminated when required. The unit is suitable for connecting to a 200–250 volt AC supply. One advantage over time switch gear is that it comes into operation when the natural light falls below a given level, irrespective of the time.

*Londex Limited, Anerley Works, London, S.E.*20. (*Sydenham* 3111.)



1, photo-electric switchgear by Londex.

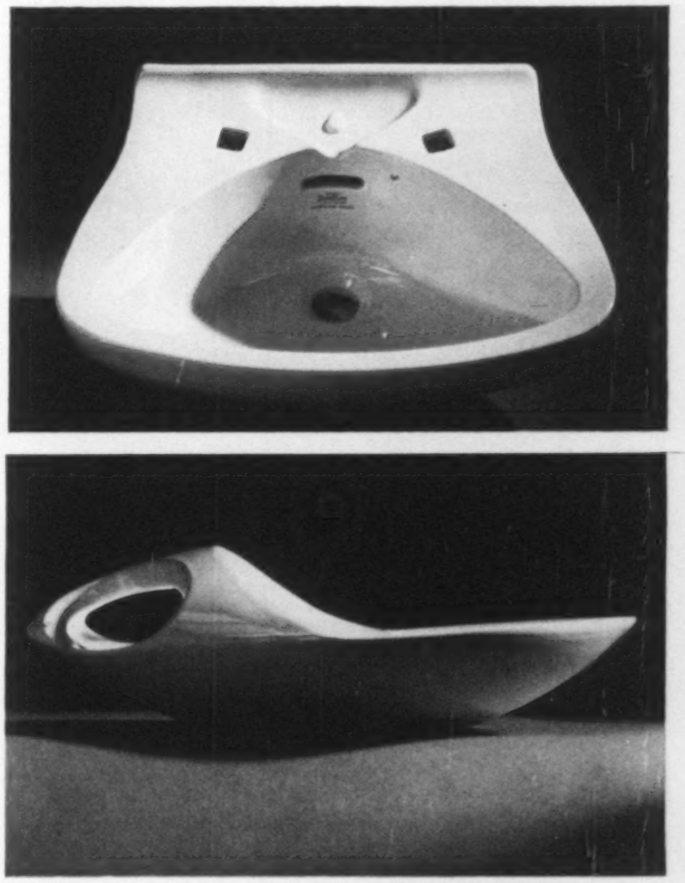
New sanitaryware

Doultons have just produced a catalogue illustrating a range of new vitreous china sanitary fittings—lavatory basins, drinking fountains, urinals, wc pans and cisterns. This section of the industry has shown exciting advances in the design of fittings over the last decade and Doultons' most recent contribution maintains the standard. The improvement in design is, no doubt, the result of employing good designers and their work reflects a careful study of functional requirements married to a feeling for the purely sculptural possibilities of lavatory basins, urinals and the like. The lavatory basin, 2, is 20 in. by 16 in. overall, has a central soap dishing and is supplied either with two tap holes or right hand one only. It is a bracket basin supported either on an aluminium central bracket or painted cast iron concealed brackets. The drinking fountain, 3, which is 11½ in. by 8½ in. has a hood at one end which protects the nozzle and has two holes in it for cleaning purposes. The nozzle is above overflow level. Colours are described as primrose, old ivory, opal green, sky blue, turquoise, light coral, mist grey, and, of course, black and white. Fortunately the admen have not yet thought of more exotic terms for black and white.

*Doulton Sanitary Potteries Ltd., Doulton House, Albert Embankment, London, S.E.*1. (*Reliance* 1241.)

Two boilers

Two new oil-fired boilers by Valor are the SA25 and the SA35, 4. These new designs are identical except that the SA35 is larger than the SA25. They can be used either exclusively for water heating or for water heating, radiators and skirting board heating. The SA25 is suitable for two to three radiators plus 30 gallons of hot water and the SA35 six radiators and 30 gallons of hot water. Operating thermal efficiency is claimed to be approximately 80 per cent in both cases. Fuel consumption is 1 pint per hour for the SA25 and 2 pints for the SA35. The makers say that the running cost of the SA35, for instance, does not exceed 4½d. per hour. Both boilers have a steel case finished in hard white enamel and a large glass-fronted inspection hole. They incorporate the Valor Blue Flame steel sleeve burner. The pilot flame burner is a turn-down device for economical running, while the built-in oil control valve incorporates a safety non-flood device as well as a thermostat which maintains an even boiler temperature within the 140–180 degree F. range. Tappings are supplied



2, the 'Beaver' lavatory basin and 3, the 'Oval' drinking fountain, both by Doultons.

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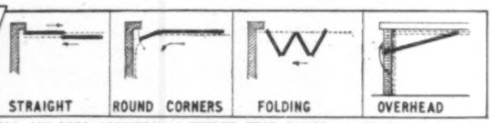

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AP 150

continued from page 428]

and should consist of the first cost divided by the expected life in years, plus interest on the first cost (usually taken at 5 per cent), plus the annual cost of cleaning. One recent estimate prepared on these lines for the most used areas of a large office building showed that terrazzo was the most economical; that linoleum, the next most economical, cost about twice as much; and that rubber and thermoplastic, which were the most expensive, cost about three times as much as terrazzo.

The detailing of floors for cleaning is a matter which has not received much attention. Of the broad design issues, one which is often missed is the need to avoid placing side by side, in the same space, floors which need a radically different cleaning treatment. The worst case of this is where a floor which must be washed (e.g. stone or terrazzo) is placed alongside a floor which must be sealed or polished.

Of the narrower design issues, what happens at the foot of the wall is by far the most significant. In the early days of the Modern Movement the standard solution, both at the foot of the wall and at corners, was to use a cove. This was completely acceptable hygienically, but less so visually. There is no doubt that an architecture of planes cannot afford the kind of blurring at the edges which a cove gives. Visually, the problem has become more acute in the last twenty years in that our hard, machine finished surfaces cannot stand up to the kind of misfortunes which cleaning brings about. The cleaners' high water line at skirting level on the washed floor, the incursions of polish on vertical paintwork, the black scuff marks from the bumpers of cleaning equipment, all of these are becoming more noticeable. The general answer seems to be to use a dark skirting and, where possible, to recess it as well. The line at which wall and floor meet will always be a line of imperfection and to withdraw it from sight seems a legitimate subterfuge.

The one-foot clearance for the floor polisher may often be acceptable for free standing furniture, but we cannot tell if it will prove the same for projections from the wall. It might be worth while for projecting wall cupboards or lockers, which otherwise add gratuitously to the number of inaccessible corners.

If information on cleaning is still less than is needed for effective design, this is because enough attention has not yet been paid to it. A recent study by R. A. Stone of BRS* showed that maintenance and decoration accounted for 13 per cent of the total cost of office buildings, 'total cost' meaning first cost plus running costs during the expected period of life. Only a part of this is attributable to floors, but it is certainly a significant part. For the architect, however, the motive for giving attention to this is not wholly economic; it is also visual. The fine, hard surfaces of modern building technique are training our eyes to notice surface defects more readily. Also, of course, there is no plethora of mouldings to distract the eye from them. The detail, therefore, which cannot be easily and effectively cleaned will soon become anathema. Apart from this, cleaning policy itself greatly affects appearance: too high a polish on too large an area is just as destructive of visual effect as too little. If the architect wishes to stabilize his visual effects (and which architect doesn't?) he must not only think of cleaning from the start of the design process, but must give his client exact instruction on how to clean on handing over the building.

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*'The economics of building designs' given to the Royal Statistical Society on March 16, 1960.

THE INDUSTRY

Wallpapers on Tottenham Court Road.

The choosing of wallpapers is perhaps one of the most skilled operations in architectural practice: room size, room shape, the direction and quality of light, all of these and many other factors besides, make each room a special case. No conceivable method of wallpaper display can cut out all hazards, but it is encouraging to notice that wallpaper manufacturers are generally setting out to provide more room for seeing papers and wider surfaces for displaying them. John Line's rehabilitated showroom in Tottenham Court Road (architect Jack Dalling) is disappointing as a design (the layout reminds you of its near neighbour, the Building Centre), but the firm continues to turn out a high proportion of the season's good wallpapers and these are much better displayed than before.

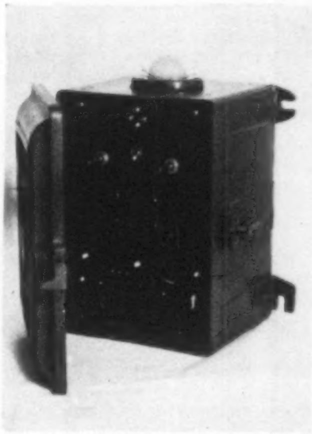
John Line & Sons Ltd., 214 Tottenham Court Road, London, W.1. Museum 3300.

Automatic switching

The amount of work which does not have to be done by the occupants of a building is increasing with the introduction of more gadgets and automatic controls. A new switch gear, 1, which operates on the level of daylight has been developed by Londex Limited to control lighting or other electrical circuits in factories, railway sidings, loading bays, hotel and theatre foyers.

Components of the gear are mounted on to a printed circuit which is fixed behind the insulated panel in front. The whole unit is mounted in a weatherproof cast iron case. Light falls on to the photocell through the glass dome on top of the casing and will cause the contacts in the unit to operate when the light has decreased to the level set on the controls provided. Similarly when the light improves to the 'lights off' level, the contacts are restored to their original position. The output contacts operate approximately 30 seconds after the pre-set light intensity has been reached. A switch is provided, however, which enables the delay period to be eliminated when required. The unit is suitable for connecting to a 200–250 volt AC supply. One advantage over time switch gear is that it comes into operation when the natural light falls below a given level, irrespective of the time.

Londex Limited, Anerley Works, London, S.E.20. (Sydenham 3111.)



1, *photo-electric switchgear by Londex.*

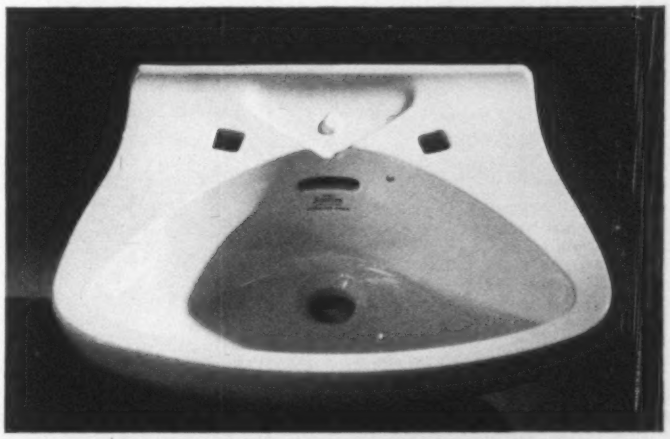
New sanitaryware

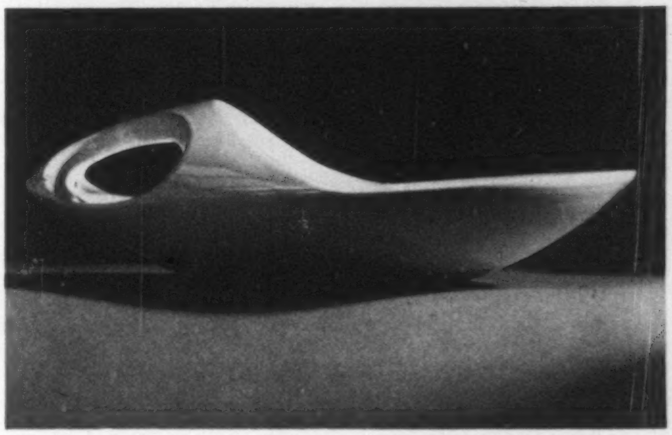
Doultons have just produced a catalogue illustrating a range of new vitreous china sanitary fittings—lavatory basins, drinking fountains, urinals, wc pans and cisterns. This section of the industry has shown exciting advances in the design of fittings over the last decade and Doultons' most recent contribution maintains the standard. The improvement in design is, no doubt, the result of employing good designers and their work reflects a careful study of functional requirements married to a feeling for the purely sculptural possibilities of lavatory basins, urinals and the like. The lavatory basin, 2, is 20 in. by 16 in. overall, has a central soap dishing and is supplied either with two tap holes or right hand one only. It is a bracket basin supported either on an aluminium central bracket or painted cast iron concealed brackets. The drinking fountain, 3, which is 11½ in. by 8½ in. has a hood at one end which protects the nozzle and has two holes in it for cleaning purposes. The nozzle is above overflow level. Colours are described as primrose, old ivory, opal green, sky blue, turquoise, light coral, mist grey, and, of course, black and white. Fortunately the admen have not yet thought of more exotic terms for black and white.

Doulton Sanitary Potteries Ltd., Doulton House, Albert Embankment, London, S.E.1. (Reliance 1241.)

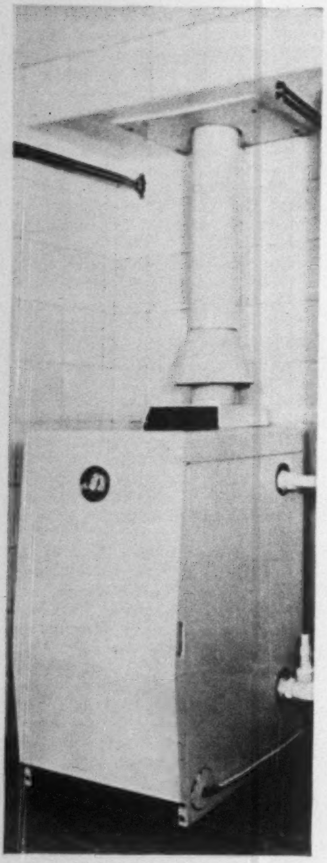
Two boilers

Two new oil-fired boilers by Valor are the SA25 and the SA35, 4. These new designs are identical except that the SA35 is larger than the SA25. They can be used either exclusively for water heating or for water heating, radiators and skirting board heating. The SA25 is suitable for two to three radiators plus 30 gallons of hot water and the SA35 six radiators and 30 gallons of hot water. Operating thermal efficiency is claimed to be approximately 80 per cent in both cases. Fuel consumption is 1 pint per hour for the SA25 and 2 pints for the SA35. The makers say that the running cost of the SA35, for instance, does not exceed 4½d. per hour. Both boilers have a steel case finished in hard white enamel and a large glass-fronted inspection hole. They incorporate the Valor Blue Flame steel sleeve burner. The pilot flame burner is a turn-down device for economical running, while the built-in oil control valve incorporates a safety non-flood device as well as a thermostat which maintains an even boiler temperature within the 140–180 degree F. range. Tappings are supplied





2, *the 'Beaver' lavatory basin and* 3, *the 'Oval' drinking fountain, both by Doultons.*



4, *the new Valor oil-fired boiler.*

both on the right and left-hand sides of the boilers. Vitreous enamel draught diverters are also supplied which may be connected to 4 in. or 4½ in. flue pipe or an existing chimney stack. The boilers are each 32 in. high, 16½ in. wide and 20¼ in. deep. The SA25 costs £65 and the SA35 £77 10s.
Valor Co. Ltd., Wood Lane, Bromford, Erdington, Birmingham, 24. (Erdington 6151.)

TDA bulletins

The latest batch of TDA Information Bulletins includes two which are particularly significant as they are concerned with design and construction in what is now known as timber engineering, a field of structures which is becoming rapidly popular. In all fairness the use of timber as a structural element on a large scale is not new, pre-dating, in fact, steel and concrete. The trouble is it somehow got crowded out by these 'newer' materials at about the time of the eighteenth century civil engineering heyday. Now, encouraged by the adhesives manufacturers, a few enlightened engineers and by the TDA itself, more and more firms are establishing themselves as not only manufacturers of large structural elements (trusses, box beams, etc.) but also constructors of buildings using these elements.

Anyone interested in timber engineering will soon find that as yet there is little data for the designer. Perhaps it is more accurate to say that the data is possibly there but not collected together in a form in which it is easily get-at-able. The new TDA Bulletins should help overcome this problem.

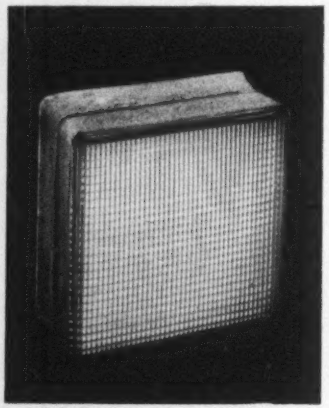
'Fabrication Manual for Connectored Assemblies' is concerned with structural units using nailed, screwed, bolted or timber connector joints. It establishes quality standards for materials and information on grading of timber and plywood. Other sections deal with engineering practice in the workshop, site work, inspection and maintenance.

'The Effective Width of Plywood Flanges in Stressed Skin Construction,' by H. Tottenham, MA, is a fairly technical study of the subject and is considerably helped by a design example at the back of the book.

Both Bulletins are available from the TDA at 3s. 6d. each.
Timber Development Association, 21 *College Hill, London, E.C.4.* (*City* 4771.)

Glass blocks

Amongst Pilkington's latest batch of new designs in glass hollow blocks is the PB4 Prismatic, 5, described as a light directing block. It is of usual size (7¾ in. by 7¾ in. by 3⅞ in.) and weighs 7 lb. For the purposes of description the four faces of the block (two for the front and two for the back) are referred to as 1, 2, 3 and 4. Of these the external faces (1 and 4) have vertical ribs and internal faces (2 and 3) have horizontal prismatic ribs at different angles. The makers say that face no. 1 is designed to collect light from wide azimuth angles; no. 4 to refract the transmitted light horizontally, thus reducing contrast glare and helping to keep the apparent brightness of the blocks low and uniform even under intense sun or sky brightness. The internal faces bend the incident light upwards, so that the maximum amount emerges above the horizontal. This prevents sun and sky glare and throws part of the light on to the ceiling, from where it is reflected into the depth of the room, giving a uniform high daylight factor.



5, *the P.B4 Prismatic glass block by Pilkingtons.*

Pilkington Brothers Ltd., St. Helens, Lancs. (*St. Helens* 4001.)

Small bore accelerator

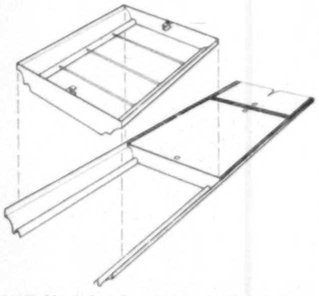
Small bore central heating is one of the most significant developments in whole house heating in recent years and equipment pertaining to it is, naturally, of considerable interest to architects. The use of small bore pipes is made possible by pumping or 'accelerating' the water through the pipes. Ideal Boilers and Radiators are now marketing a very neat little accelerator, 6, suitable for domestic installations. Made of non-ferrous metal it has a projection of less than 3 in. from the centre of the pipe. It is quiet in operation and suitable for temperatures up to 275°F. The manufacturers describe it as having no seal or gland to leak or require servicing. Accessories include a set of four flanges for connection between accelerator and pipe.

6, *Ideal-Hotflow accelerator for small bore central heating.*

Ideal Boilers and Radiators Ltd., Ideal House, Great Marlborough Street, London, W.1. (Gerrard 8686.)

Duct cover

Broads have produced a new floor duct frame and cover, 8, called 'Stelduct.' It is manufactured from 12 gauge zinc-coated steel. The frame which supports the cover trays is made in lengths of 5 ft. and requires a 3 in. deep by 4 in. wide rebate along either side of the floor duct. The cover is in lengths of 2 ft. 6 in. and will take a safe distributed load of 1,120 lb./sq. ft. when filled to the top with 4 : 2 : 1 concrete mix. The tray has $\frac{3}{16}$ in. diameter rods across it at intervals to provide a 'key' for the infill.



8, *'Stelduct' duct frame and cover by Broads.*

Broad & Co. Ltd., 4 *South Wharf, Paddington, London, W.2. (Paddington* 7061.)

Ceiling panel

A new ceiling panel produced by the Building Boards Division of the Bowater Organization consists of a timber frame, ¾ in. thick, faced on the exposed side with ⅛ in. thick bevelled edge leather grained hardboard and on the back with an aluminium faced waterproof paper, providing a sealed air space between. Each panel is 2 ft. square, 7.

It is fixed direct to timber joists or grounds by nailing through the frame with 1½ in. lost head nails. The exposed edges of the timber frame are grooved and hardboard splines are slipped into these to ensure alignment of panels. Covering capacity is 2¼ panels per square yard of ceiling area. Holes can be drilled for lighting fittings, etc., and as the frame is closely bonded to the hardboard face, removal of sections of the frame will not impair the strength of the panel as a whole. The makers claim that used in conjunction with ¾ in. thick tongued and grooved boarding the panel provides a U value of 0.22. Price per square yard, supply and fix, is 15s. for normal installations.
*The Bowater Organization, Bowater House, Knightsbridge, London, S.W.*1. (*Knightsbridge* 7070.)

Gas cooker

There has been a lot of rethinking on cooker design in recent years and the various parts of this essential item of domestic equipment have all, in their turn, been the subject of study by the designers. A few years ago it was the oven, with the emphasis on being able to see what it was doing to the Sunday joint without opening the door. Now it is the griller and it is probably true to say that this item has come up in the world. Eye level grillers are the thing. A smart new cooker, 9, by R. and A. Main Ltd. has, as one of its principal features, a griller at eye level and a shelf beneath this on which plates may be stacked. The warming compartment and shelf combined will accommodate six large plates. A tap on the right-hand top side of the back plate automatically operates both griller and warming burner. An anti-clockwise turn puts on the griller and a clockwise one the warming burner. This tap incorporates an interlock mechanism which ensures that the gas to the griller cannot be turned on with the door to the compartment

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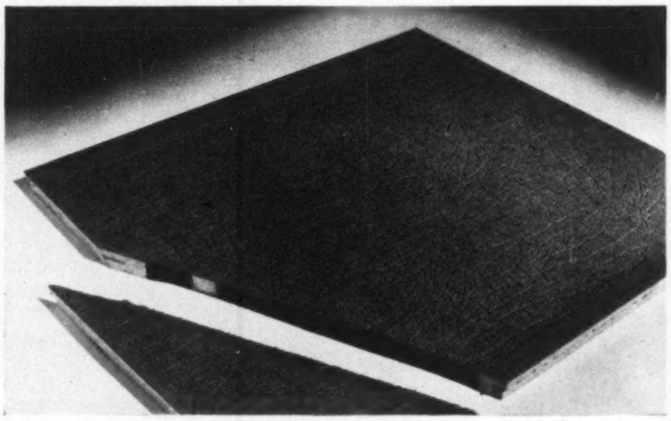
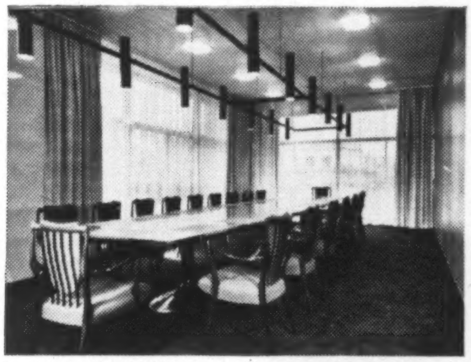
7, *the Bowater D/C ceiling panel.*





Boardroom Castrol House.

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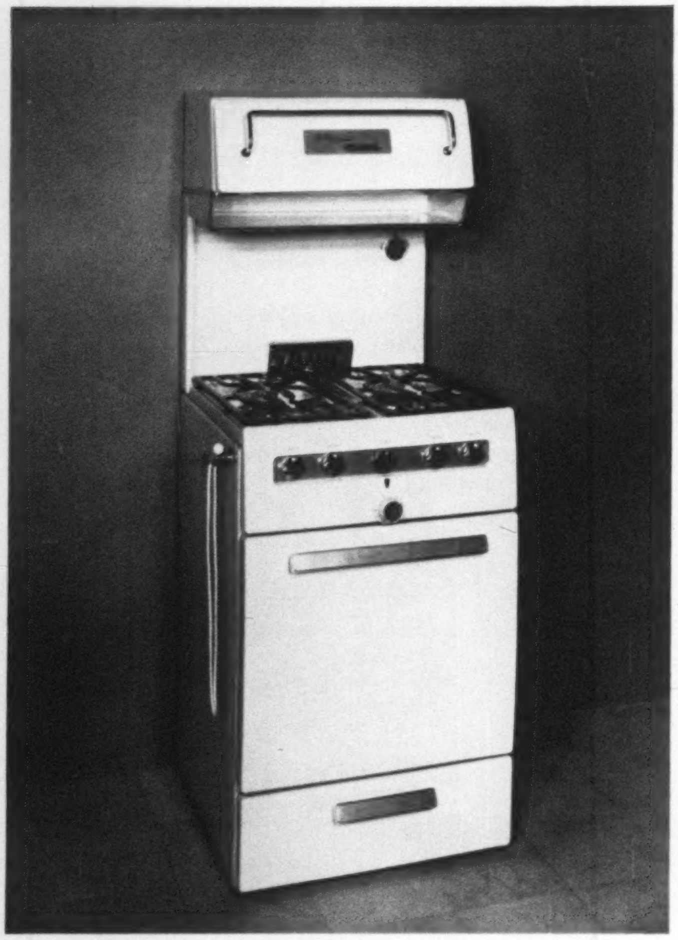
Architects for Castrol House: Messrs Gollins, Melvin, Ward and Partners, in association with Sir Hugh Casson and Neville Condor.

continued from page 430]

closed or the door closed if the gas is on.

The oven has a drop down door, counter-balanced for easy handling, is spring loaded and seals into a stainless steel spring grip fitted around the front edge of the oven. Automatic temperature control is by means of a rod type thermostat, the setting knob being on the fascia immediately above the oven door. A single burner is fitted at the back and is lighted through a flash port situated at the front of the oven.

Finish is high-gloss vitreous enamel and it is available in white or cream. Overall dimensions are 57½ in. high, 23⅛ in. wide (including the gas torch at the side), 23⅝ in. deep. The hot plate is 34 in. above floor level.
R. and A. Main Limited, 48 *Grosvenor Gardens, London, S.W.1.* (*Sloane* 6241.)



9, the 'Monarch' gas cooker by R. & A. Main Ltd.

New catalogues

To the busy architect it is bad enough to be inundated with manufacturers' leaflets which tell you nothing about the product—at least nothing of any use to the architect. But to be sent a so-called Architect's Catalogue which also succeeds in telling you nothing is infuriating. The manufacturer who produces a catalogue which looks good and at the same time contains *all* the technical information about his product is to be encouraged for he is a rare bird. The Cape Asbestos Company Limited has just produced a set of three handsome catalogues which deal with one of their products, 'Rocksil.' One catalogue is devoted to the use of 'Rocksil' in marine engineering, one to its use in industry and a third to its application to transport, kitchen equipment and domestic piping. Each catalogue tells you on its front cover what it is about. Each one contains a detailed specification of the product and other information, such as thermal conductivity. The layout is imaginative and yet clear and simple. For example under each type of 'Rocksil' (i.e. rocks, slabs, building mat, loose wool, etc.) the information is tabulated as follows: 'description,' 'packaging,' 'use,' 'density,' 'size,' 'thickness,' 'price unit.' All the catalogues are of the same size. The pity is that they are all the wrong size! Why the designers (Woodhuysen Design Group) who, otherwise, have done such a good job, should have failed to look up the appropriate British Standard (BS 1311 : 1955) for guidance on size is hard to understand. For years architects have been campaigning, not just for better design, but for standardization of sizes and the failure to produce them to A4 size takes the edge off the welcome these catalogues deserve.
The Cape Asbestos Company Limited, 114/116 *Park Street, London, W.1.* (*Grosvenor* 6022.)

Partitions

The rapid increase in commercial building in our cities has meant that the planning of offices is a fairly constantly recurring problem for architects. In the USA much emphasis is placed on a large open area or general office in which everybody works including, sometimes, the executives. We, on the other hand, are loyal to the idea of relatively small working spaces where some degree of privacy is possible. Hence the market for office partitions.

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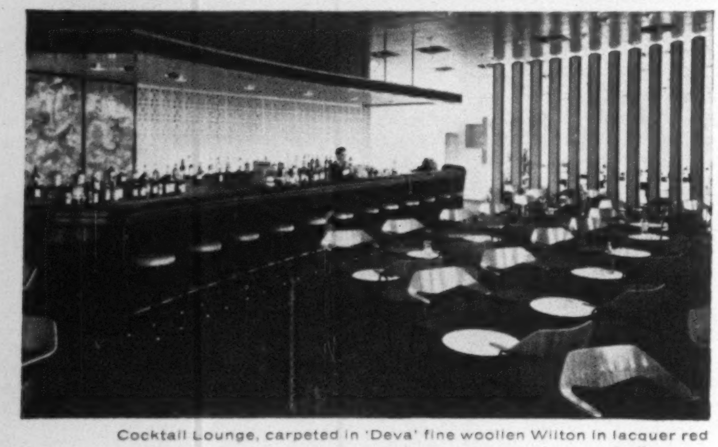
Guest Lounge, carpeted in 'Rhapsody' textured Wilton in shades of rich purple



Cocktail Lounge, carpeted in 'Deva' fine woollen Wilton in lacquer red

Skyway Carpets

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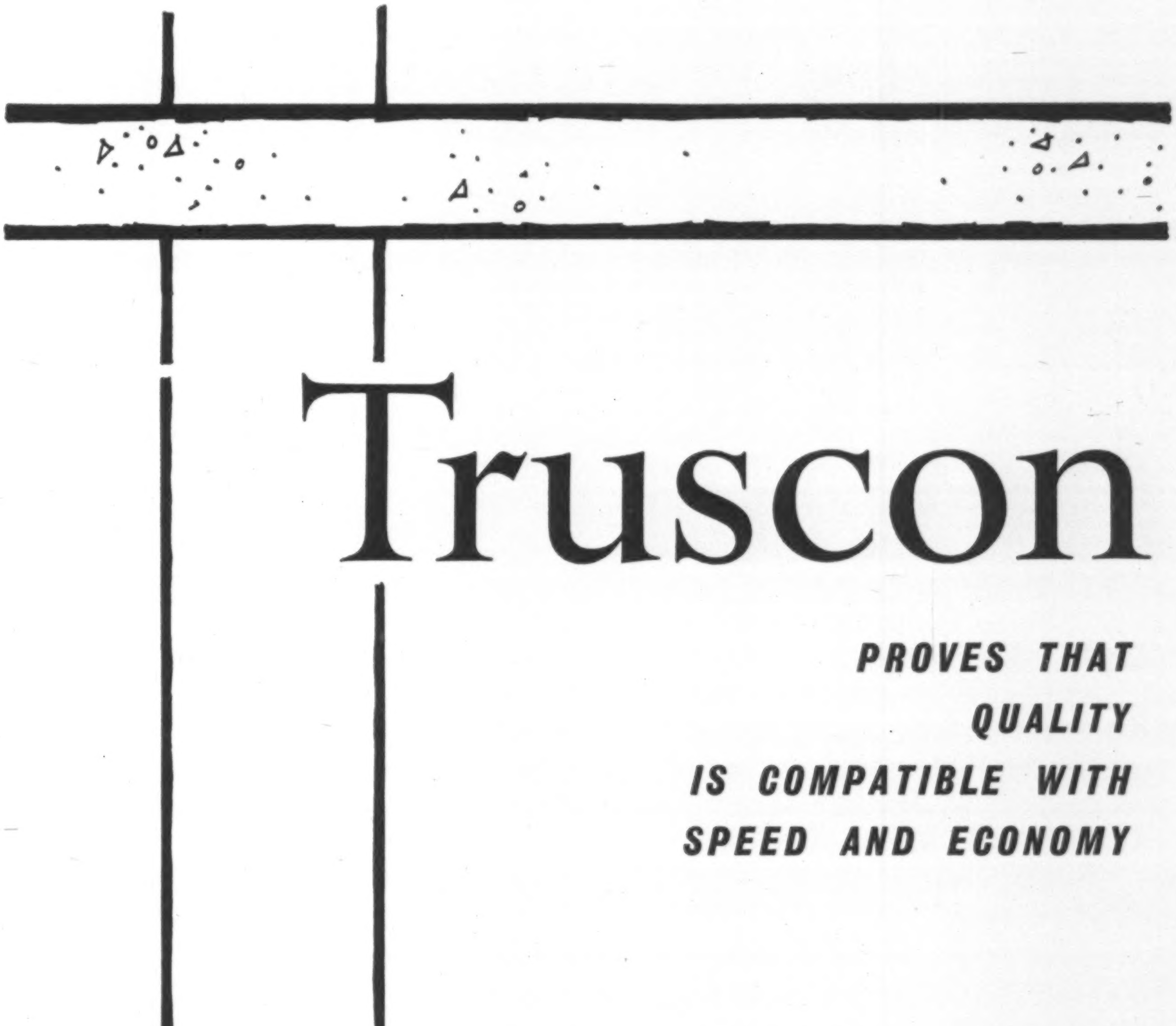

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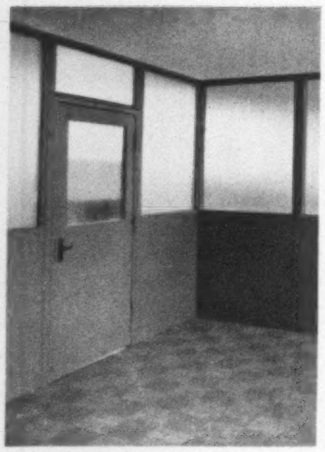
continued from page 432]

Despite the preference of some architects to design the partitions along with everything else in the building and the fact that most large manufacturers will purpose-make any partition you want, there is an increasing range of sound design in 'off-the-peg' partitioning.

The steel partitions, 10, are of the usual neat and sturdy form which is possible using this material. One of the advantages of steel for this purpose is that the designer can more easily rationalize his design to the point where site assembly is almost as simple as putting together a meccano set. No fixings are visible and, in fact, very few fixings are required to the building's structure itself. The standard Norwood partition is on a 3 ft. 2 in. wide module and panels are made in standard heights of 7 ft. 2 in., 8 ft. 2 in., 9 ft. 2 in. and 10 ft. 2 in. The solid section of the panel is a metal casing with an infill of mineral wool to assist in sound reduction. All metal parts are stove enamel and there is a variety of standard colours available. The connection between panels is a particularly sound detail providing for a snap-in cover plate on one side. The removal of this plate enables access to the fixings between panels and the space is suitable for vertical conduit runs. It is interesting to note that the number of principal component parts has been reduced to four.

Norwood Steel Equipment Limited, **149** *Borough High Street, London, S.E.*1. (*Hop* 5033.)



10, *Norwood standard steel partitioning.*

CONTRACTORS etc

Three Power Stations. *Architects:* Farmer & Dark. **Willington, Derbs.** *Main contractors:* Marples Ridgway & Partners Ltd. *Ash pipeline construction:* Crowley Russell & Co. *Structural steelwork:* Edward Wood & Co. *Main cold water storage tank:* Braithwaite & Co. Engineers Ltd. *Aluminium cladding, patent glazing, metal windows, lantern lights, concrete roof lights and opening gear:* Williams & Williams Ltd. *Asphalt roofs:* Ragusa Asphalte Paving Co. *Sanitary fittings:* Broads Manufacturing Co. *Heating and hot water installations:* Rosser & Russell Ltd. *Metal flooring and handrailing:* Power Utilities Ltd. *Glazed wall and floor tiling and quarry tiling:* Alan Milne Ltd. *PVC and rubber floor tiling:* Semtex Ltd. *Door furniture and ironmongery:* Comyn Ching & Co. (London) Ltd. *Sliding folding doors:* Bolton Gate Co. *Light weight barrel vault roofing:* Cheeseman & Sons; Tubewrights Ltd. *Timber flush doors:* Gliksten Doors Ltd. *Steel partitions:* Roneo Ltd. *Open mesh steel partitions:* Steelbrac Ltd. *Aluminium cubicles partitions:* Wm. Mallinson & Sons. *Acoustic tile ceilings and wall linings and glazed screens to control room:* Anderson Construction Co. *Wood block floors:* Vigers Bros. Ltd. Bennett's Wood Flooring (Tungit) Co. *Asphalt floors:* Limmer & Trinidad Lake Asphalt Co. *Granolithic floor tiling:* Prodorite Ltd. *Cement glass wall finishes:* Modern Surfaces Ltd. *Special roof finishes and weather hoods:* Samuel Wheeler Ltd. *Metal clothes lockers:* Norwood Steel Equipment Ltd. *Rolling shutters:* Haskins. *Post and wire fencing:* Allen Fencing Ltd. *Unclimbable steel fencing:* Bayliss Jones & Bayliss Ltd. *Venetian blinds:* Contravent Ltd. *Cycle and motor cycle stands:* Odoni Productions Ltd. *Paint suppliers:* Leyland Paint & Varnish Co. *Facing brick suppliers:* Uxbridge Flint Brick Co. *Reinforced concrete chimneys:* Tileman & Co.

Marchwood, Hants. *Civil engineering:* Sir Robert McAlpine & Sons. *Building work (except workshop and stores):* Staverton Builders Ltd. *Structural steelwork:* Alexander Findley & Co. *Chimney number one:* Chimneys Ltd. *Chimney number two:* J. L. Kier & Co. *Sub-contractors: Cladding (main buildings):* Aypex Ltd. *Cladding (canteen and welfare block):* Hills (West Bromwich) Ltd. *Heating, ventilating and plumbing:* Benham & Sons Ltd. *Painting:* Baxter Bros. Ltd. *Asbestolux internal linings:* The Cape Asbestos Co. *Column-guards:* Huntley & Sparks Ltd. *Floor tiles:* Alan Milne Ltd. *Clothing lockers:* Speedweel Gear Case Co. *Facing bricks and sanitary fittings:* Broad & Co. *Roller shutter doors:* Dennison, Kett & Co.

Belvedere, Kent. *General contractor:* M. J. Gleeson (Contractors) Ltd. *Steelwork:* Sir Wm. Arrol & Co. *Reinforced concrete chimneys:* Tileman & Co. *Sub-contractors:* Atlas Lighting Co., Atlas Stone Co., D. Anderson & Son, Ancorite Ltd., Adamsez Ltd., Broad & Co., James Briton, British Patent Glazing Co., William Briggs & Sons, Cape Building Products Ltd., Carter & Co. Clark & Fenn Ltd., Claridges (Putney) Ltd., Carter-Horsley (Engineers) Ltd., Colt Ventilation Ltd., Concrete Ltd., Coronet Engineering Ltd., Courtaulds-Celanese, Durasteel Ltd., Dover Engineering Co., Diespeker & Co., Electric Installation Co. (Wimbledon), G. Forrest & Son, Greenwood Airvac, Stewart & Gray Ltd., Hall & Co., Heyman Construction Ltd., W. H. Heywood & Co.,

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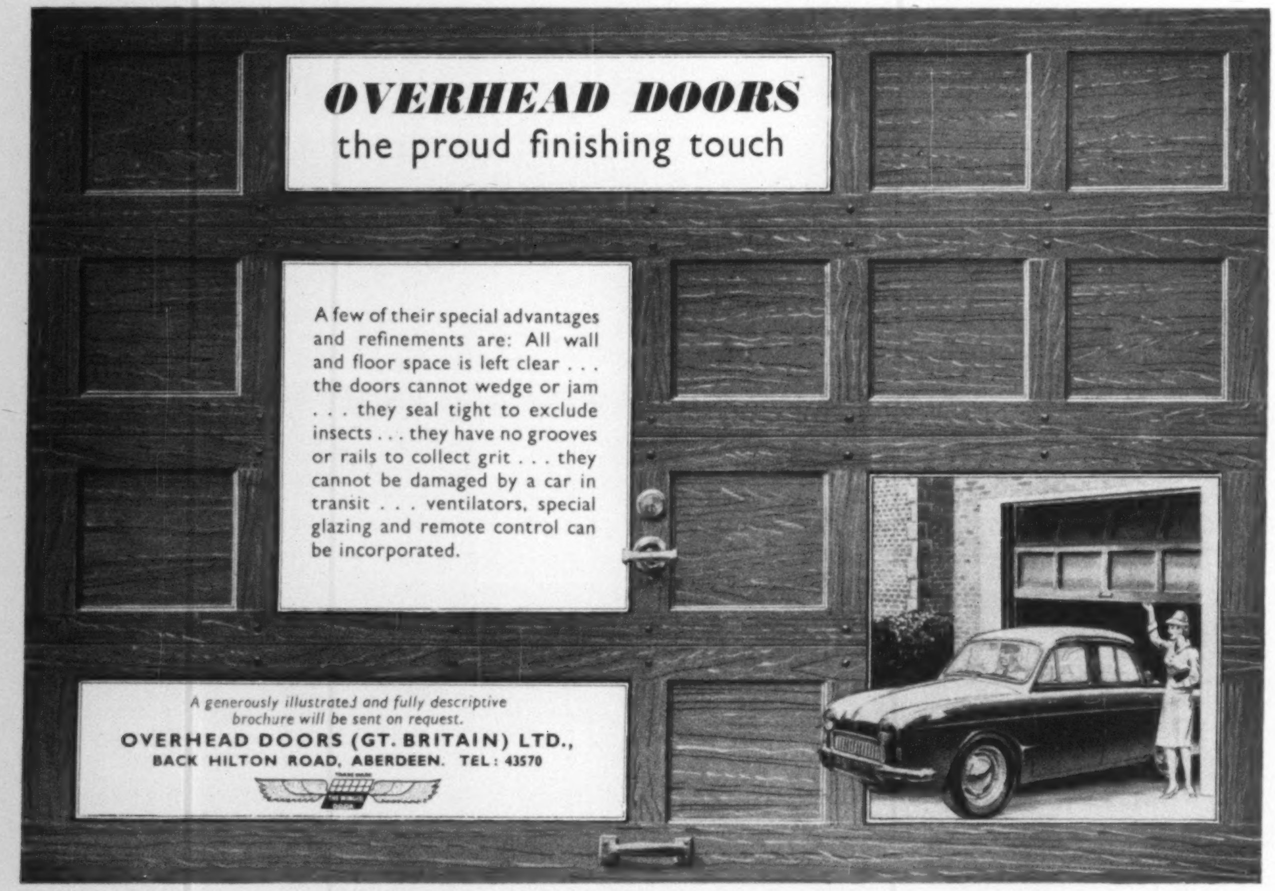

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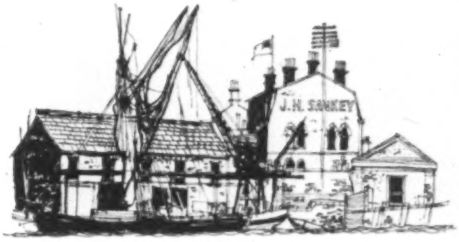

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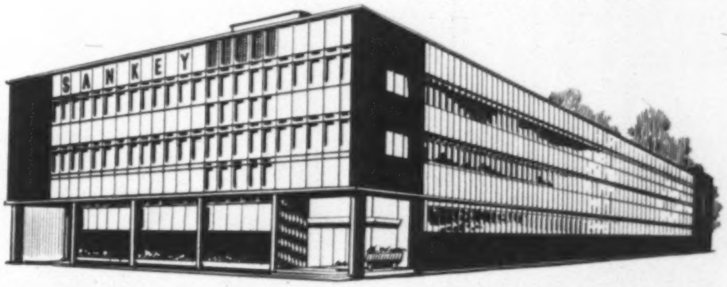

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continued from page 434]

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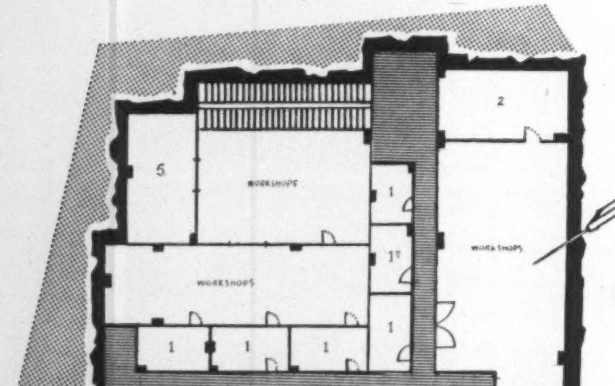

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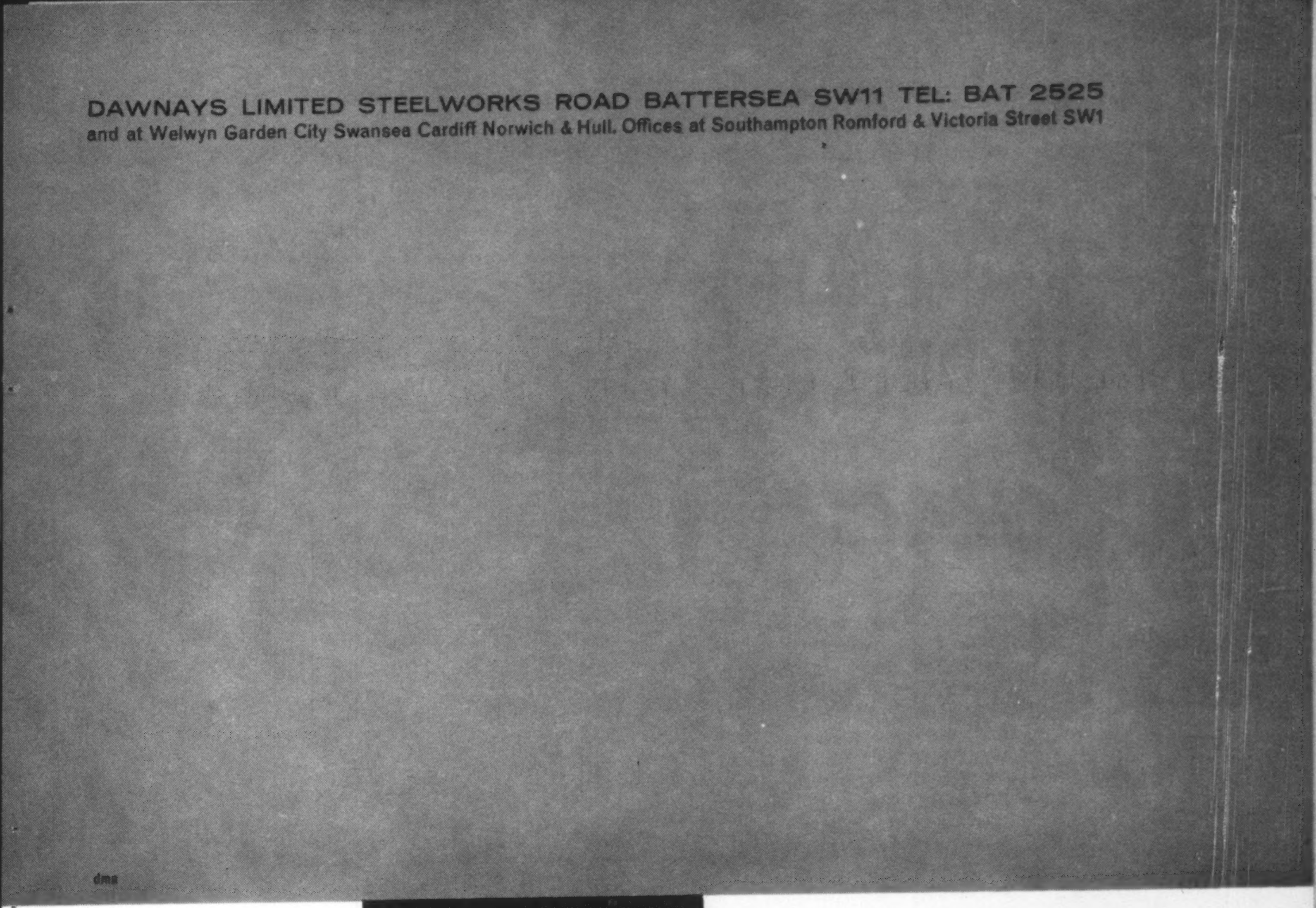

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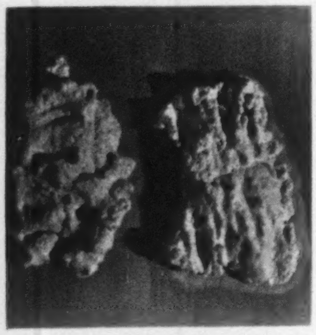
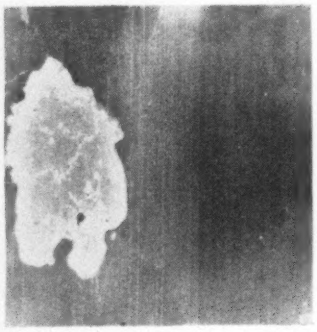


Before Hosing



After Hosing

Anodized aluminium plate; left hand side unlacquered, right hand side coated with Lakadize BUT/100, each part splashed with mortar (four parts sand, one part cement, one part lime) before and after hosing off. Note; all trace of mortar removed from coated section—severe corrosion on uncoated section.

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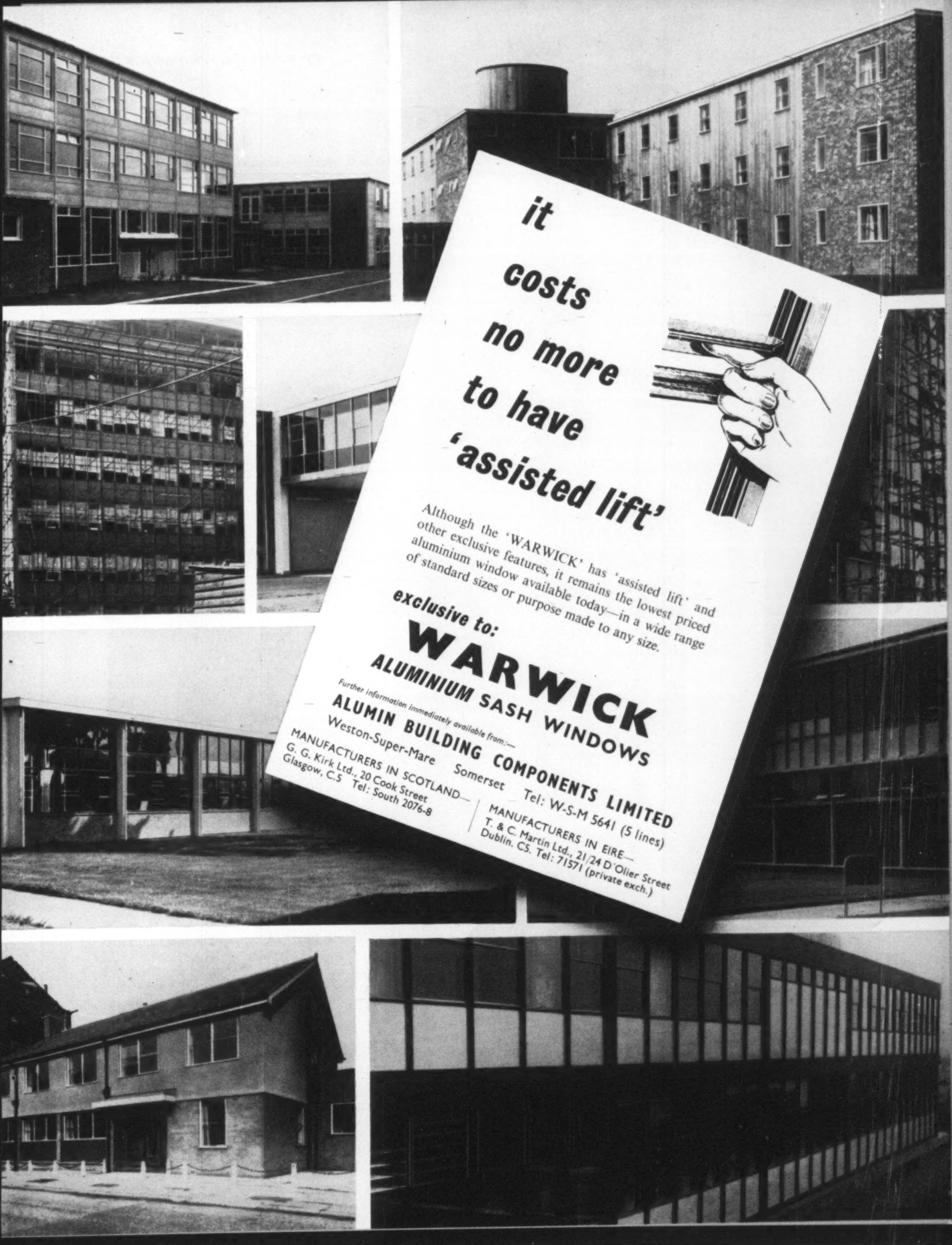

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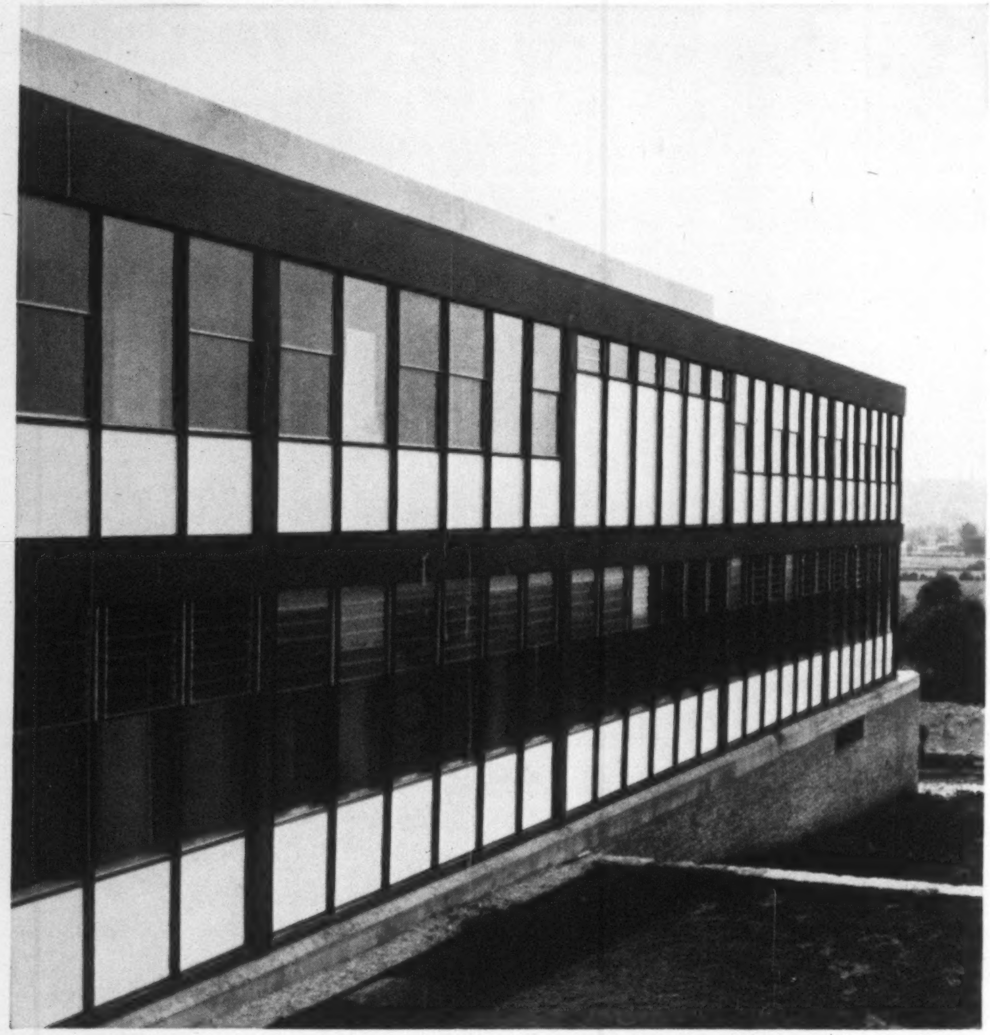

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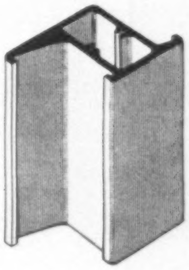
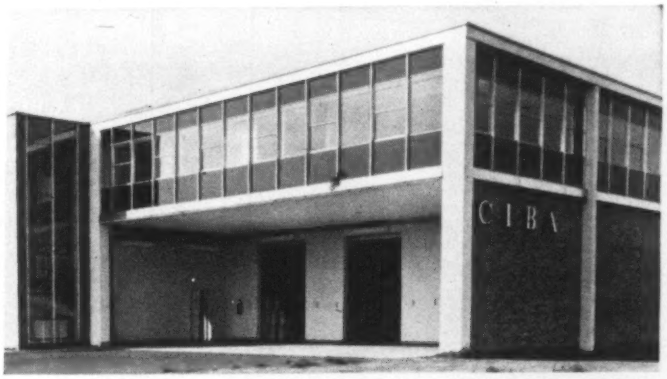
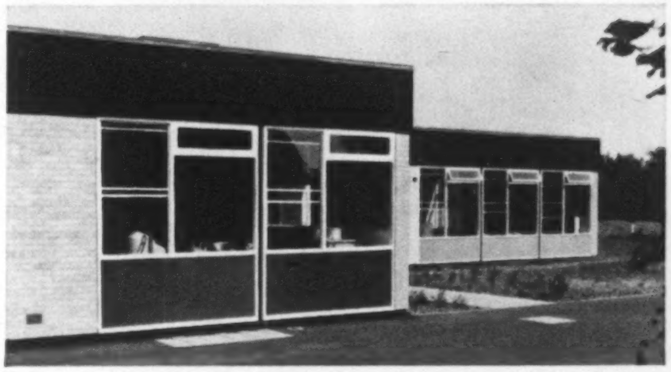


A typical example of an extrusion for aluminium windows



"Warwick" double-hung sash windows, manufactured by ALUMIN BUILDING COMPONENTS LTD., *were specified for the new CIBA laboratory at Horsham. Architects: J. Douglass Mathews & Partners.*



Dorney County Primary School, Eton, showing "Warwick" aluminium windows fitted as inserts into softwood frames with associated fixed lights. Architect: F. B. Pooley, F.R.I.B.A., F.R.I.C.S., A.M.P.T.I.

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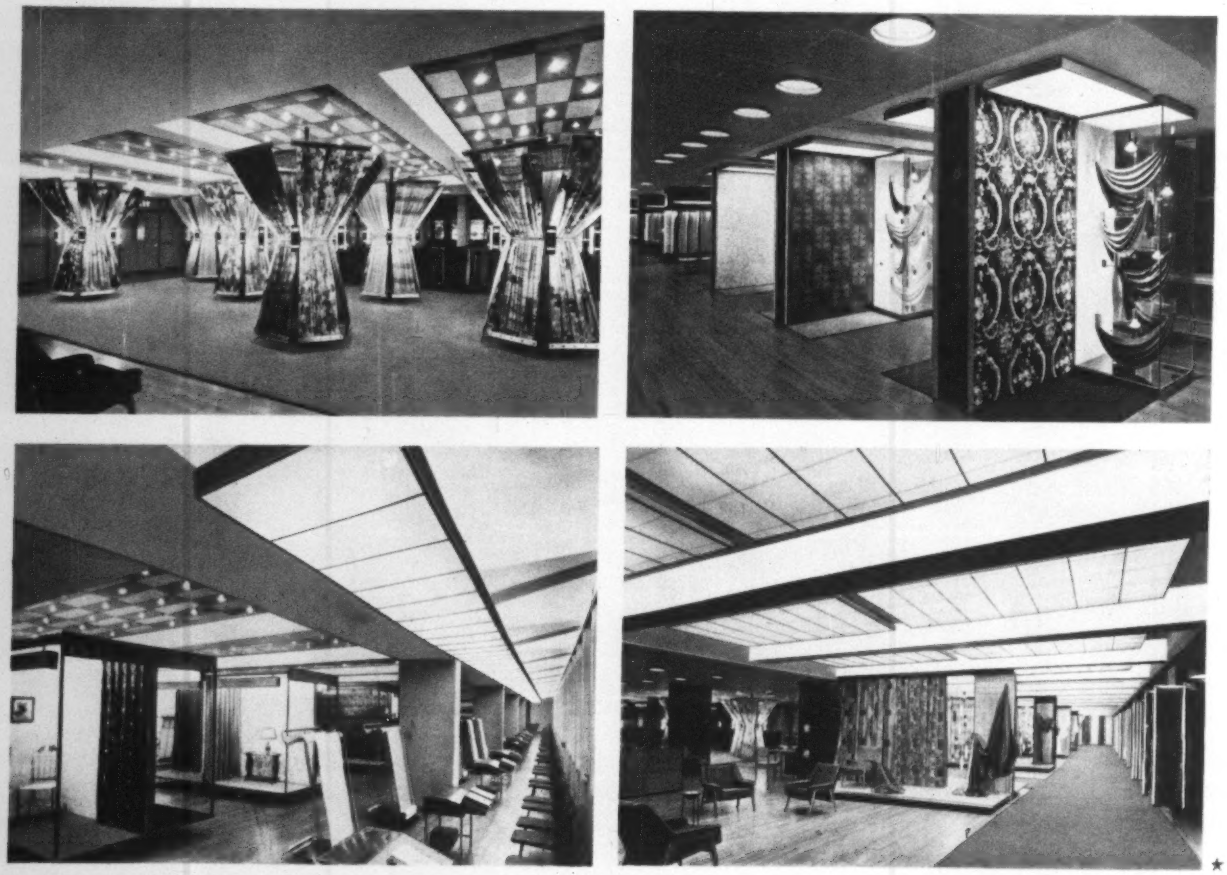

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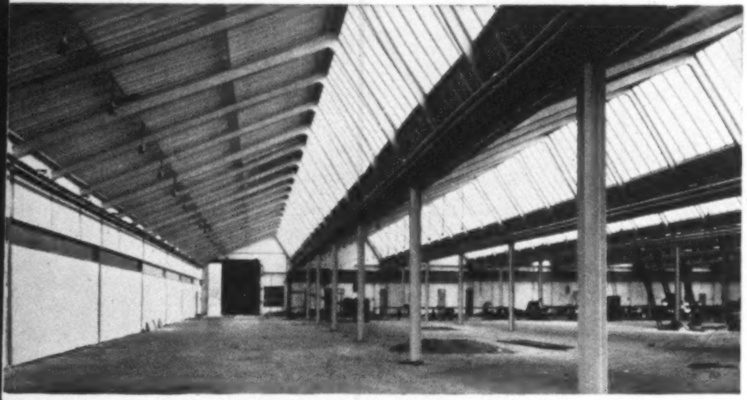

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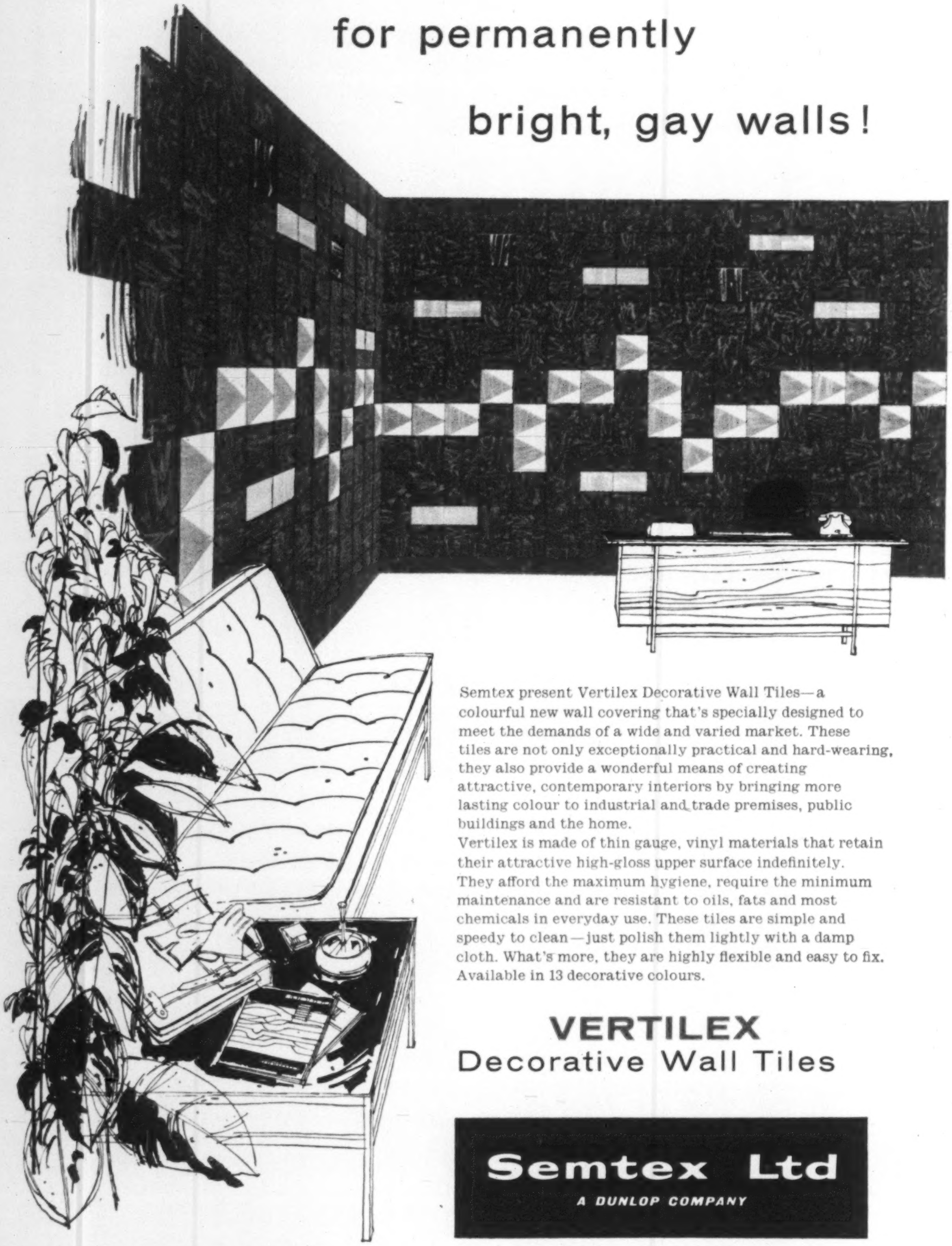

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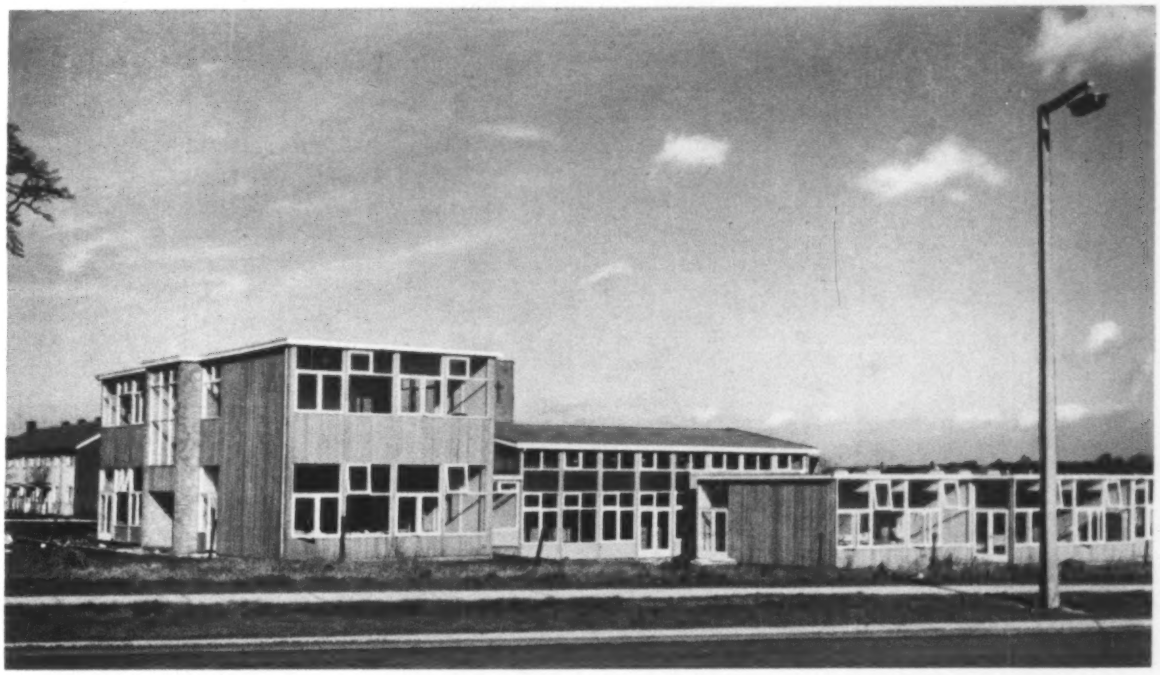

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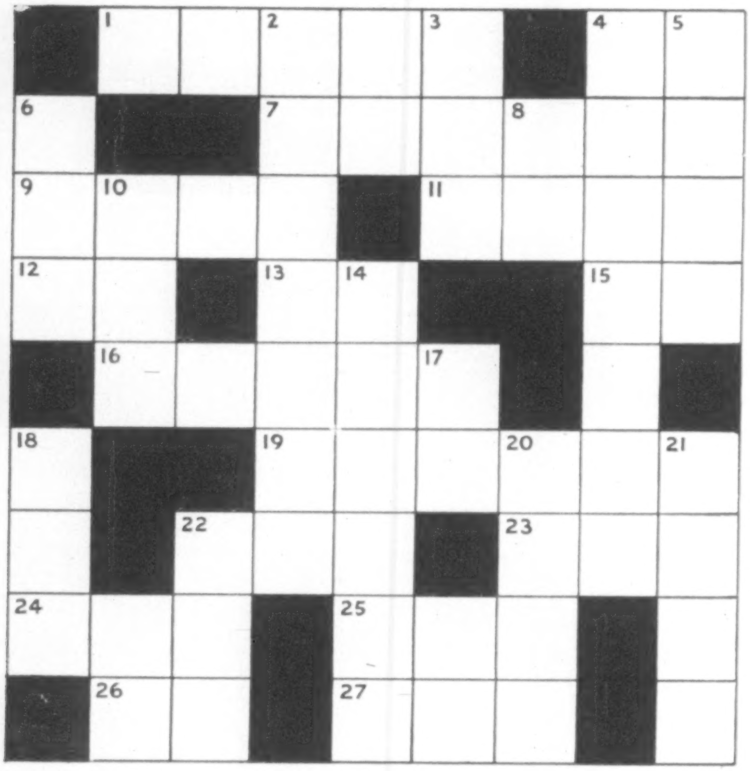

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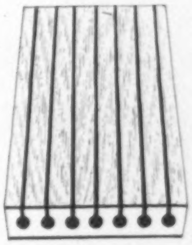

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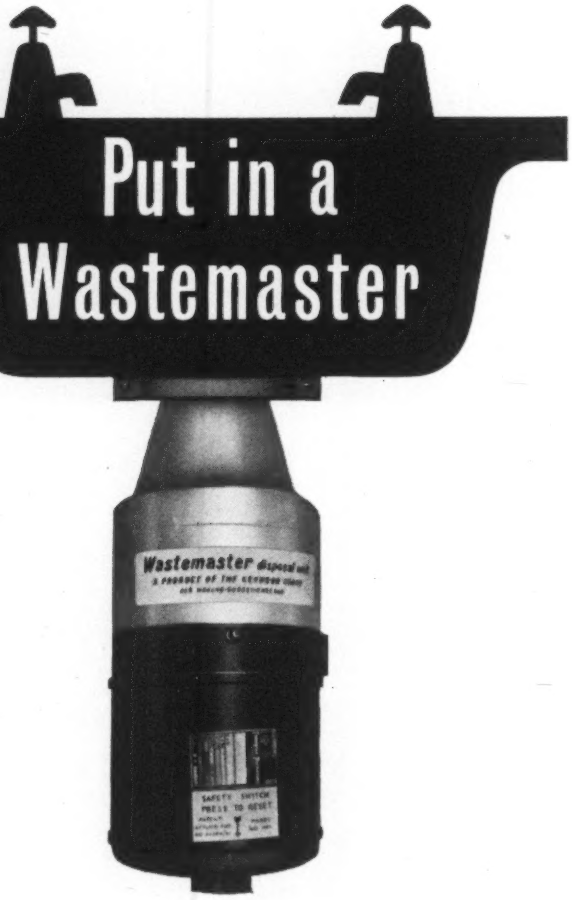
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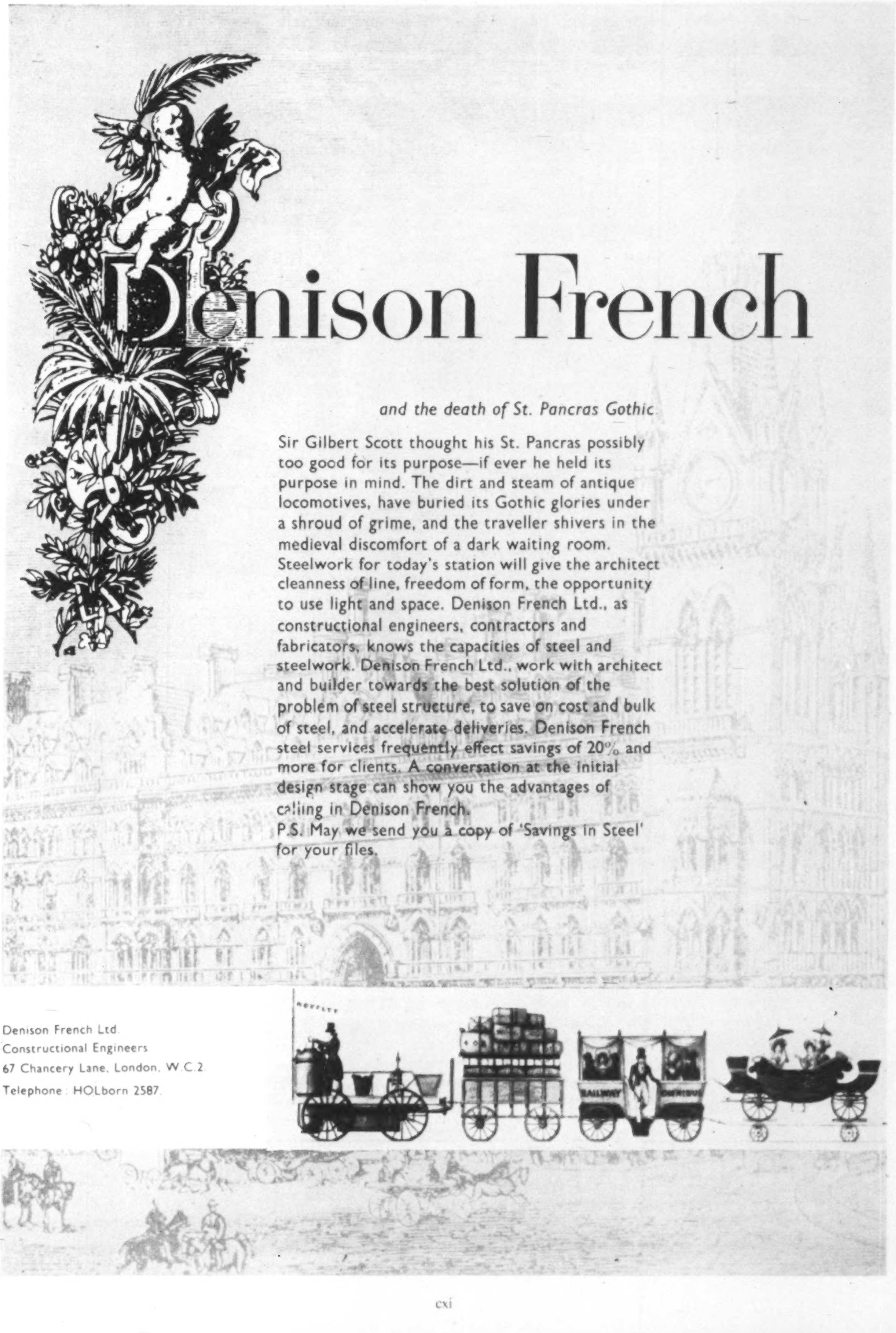

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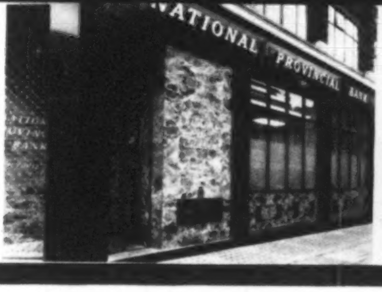
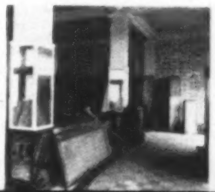
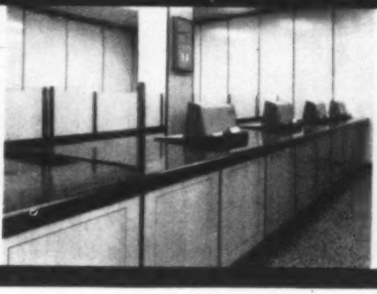
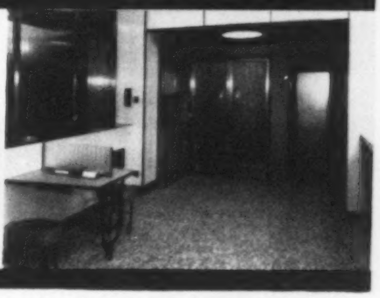


The main banking hall has all walls but one panelled in straight grained white ash. The rear wall is covered in Texturide for contrast.





The entrance to the banking hall has walls covered in PVC material. Writing tables have black metal frames and grey-green leather tops.



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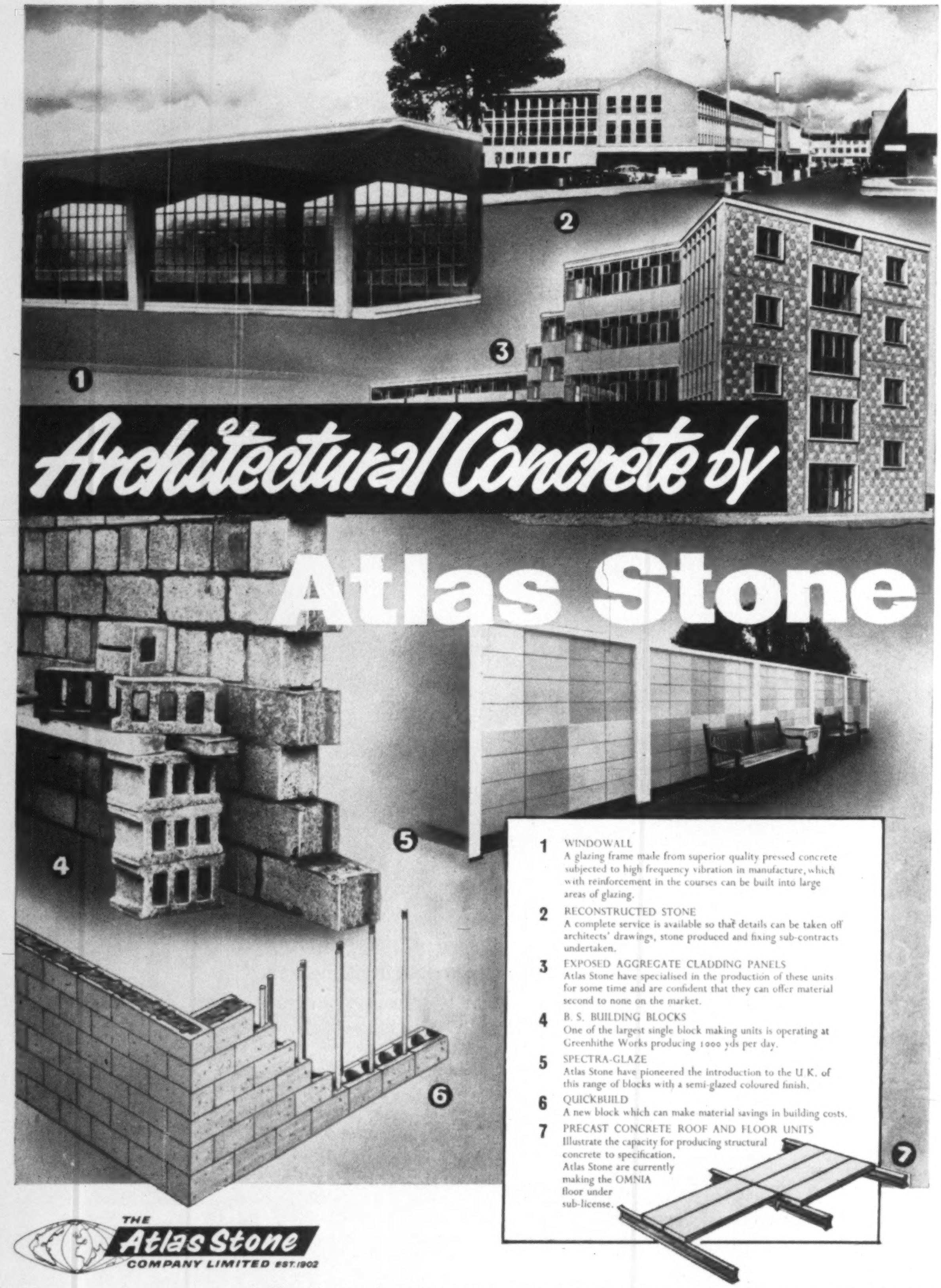

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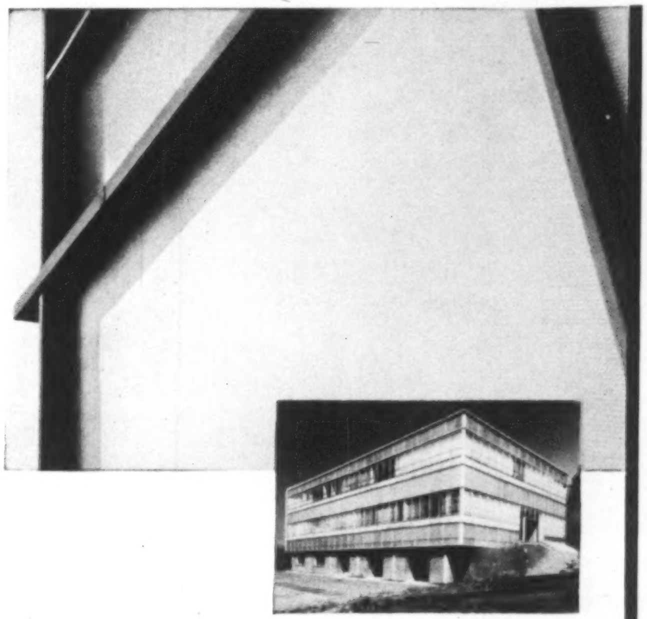

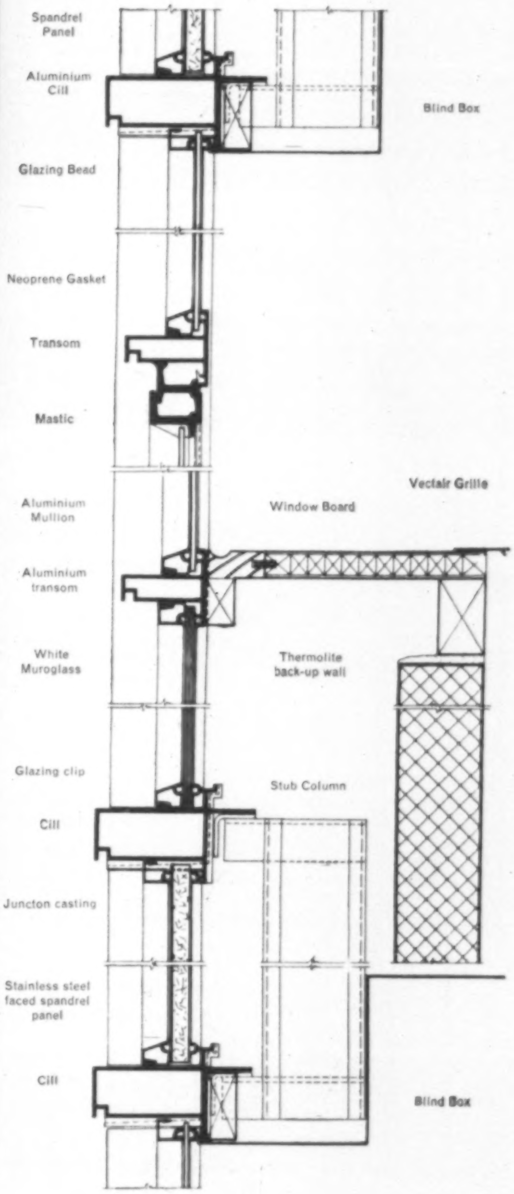
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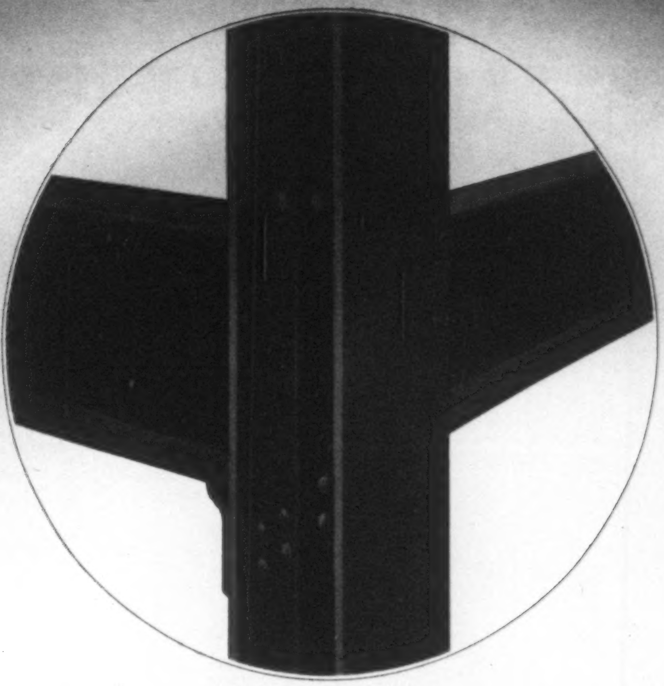

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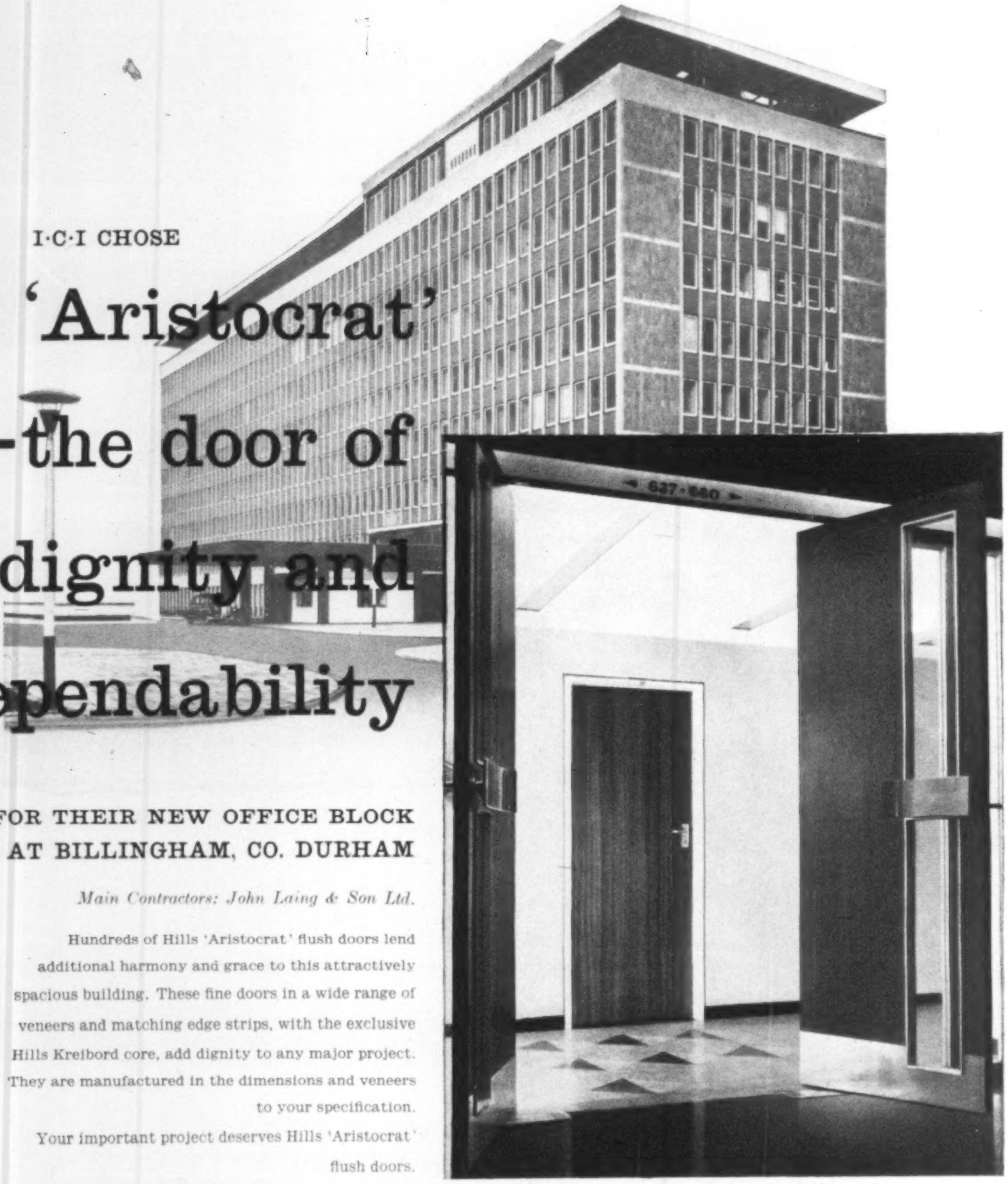

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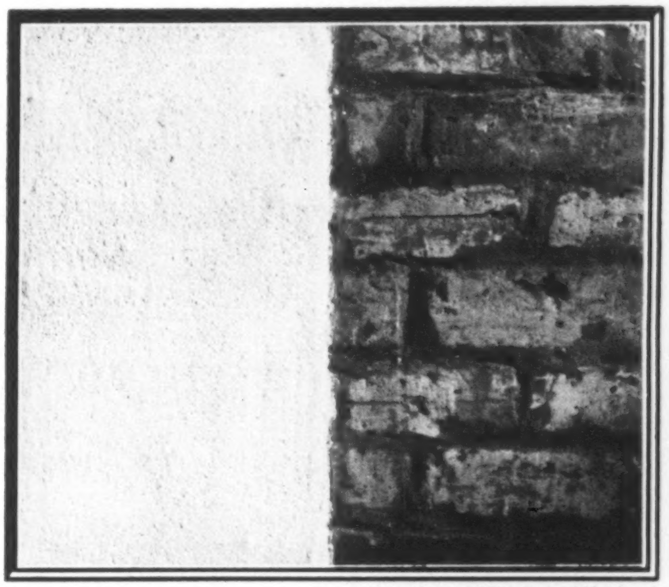

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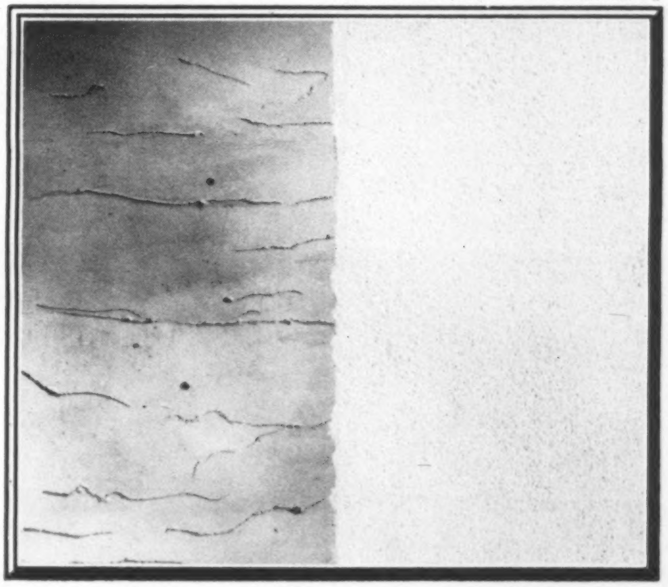

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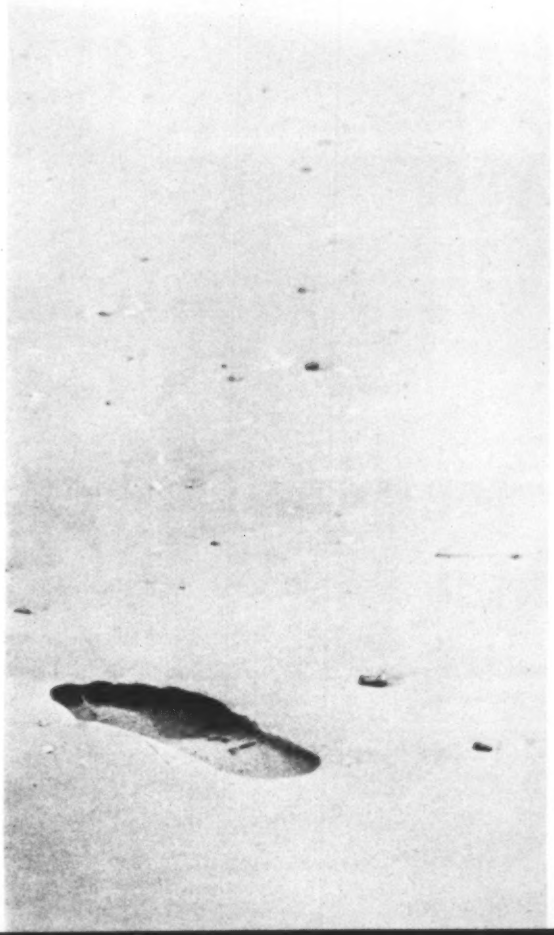

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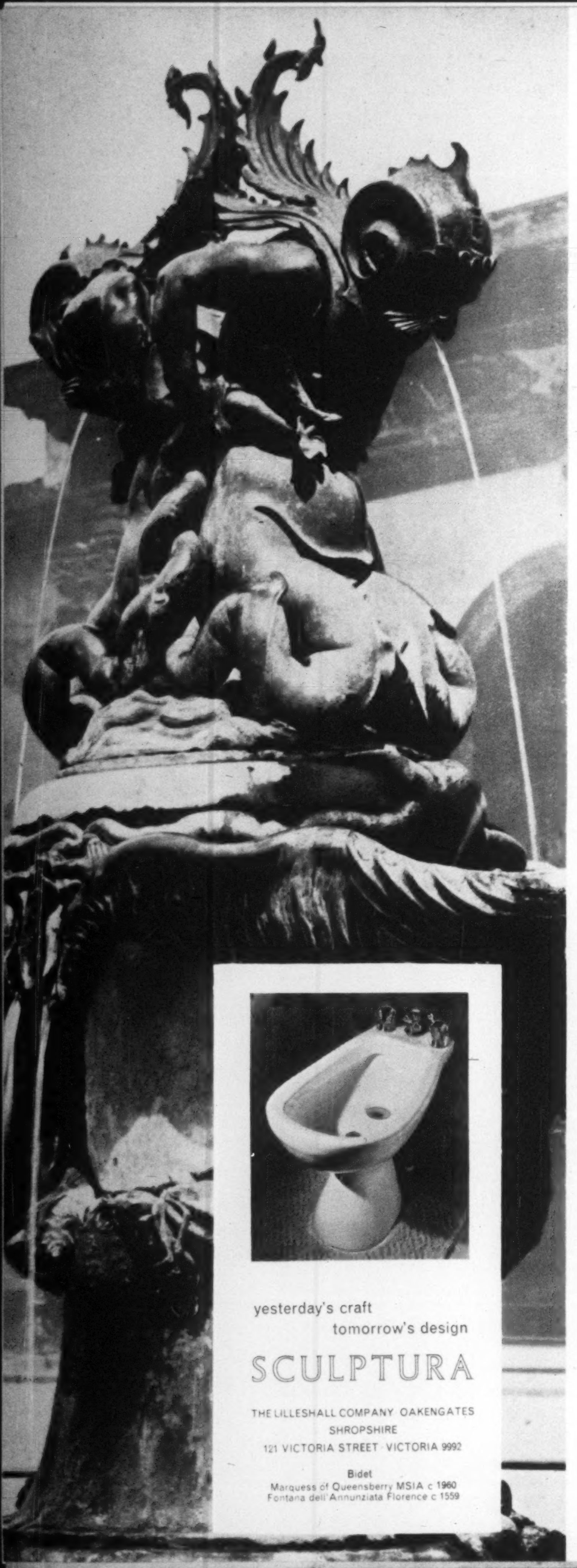

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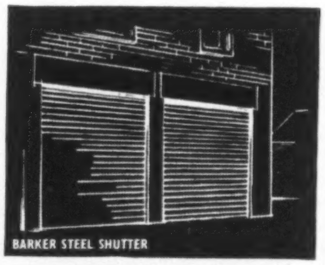

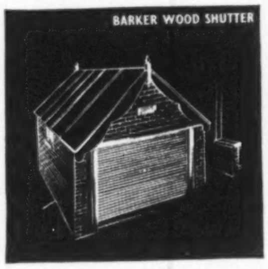

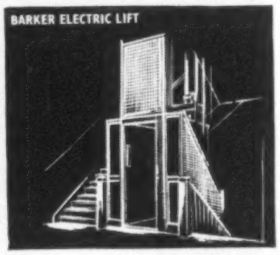

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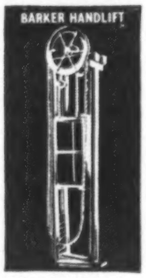

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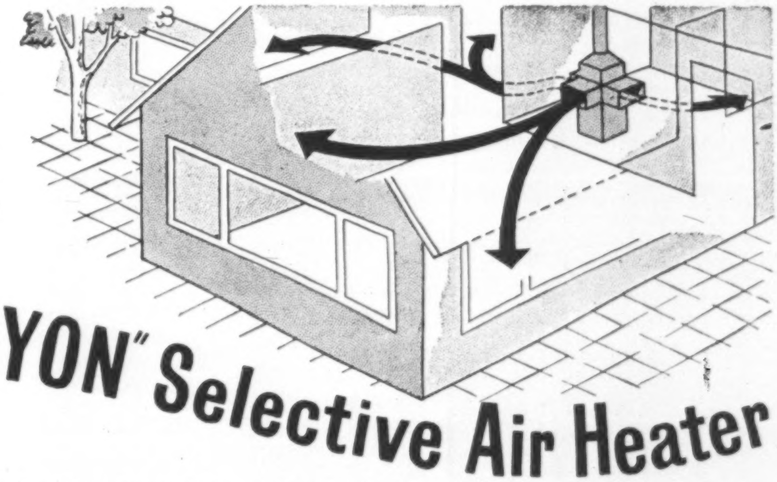

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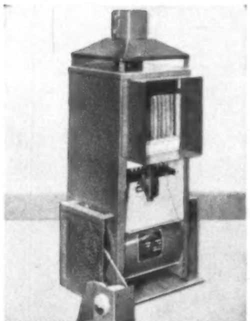

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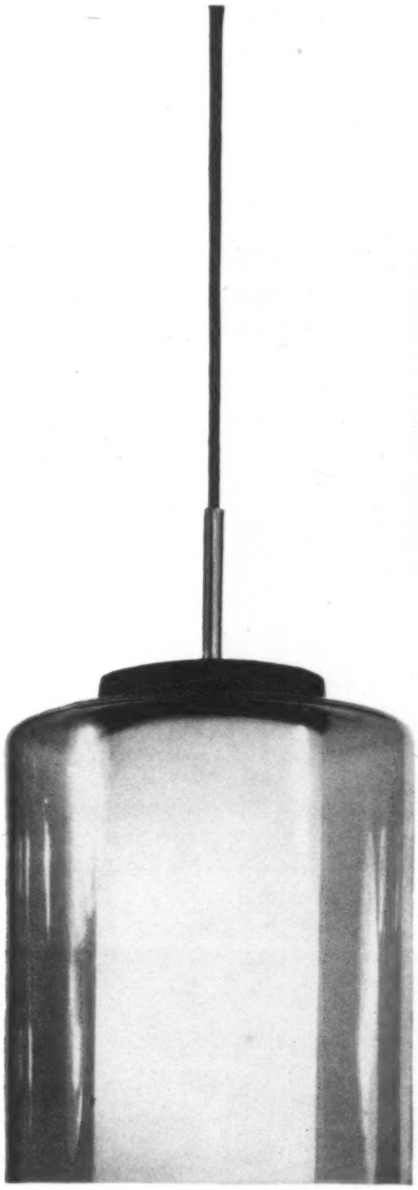

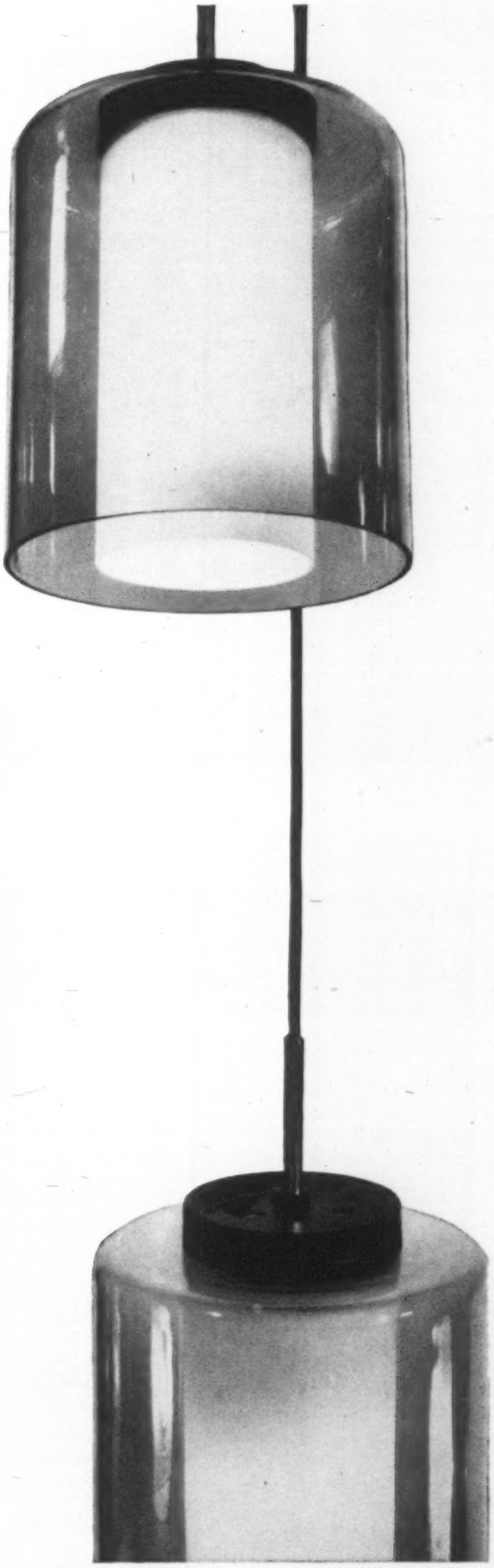

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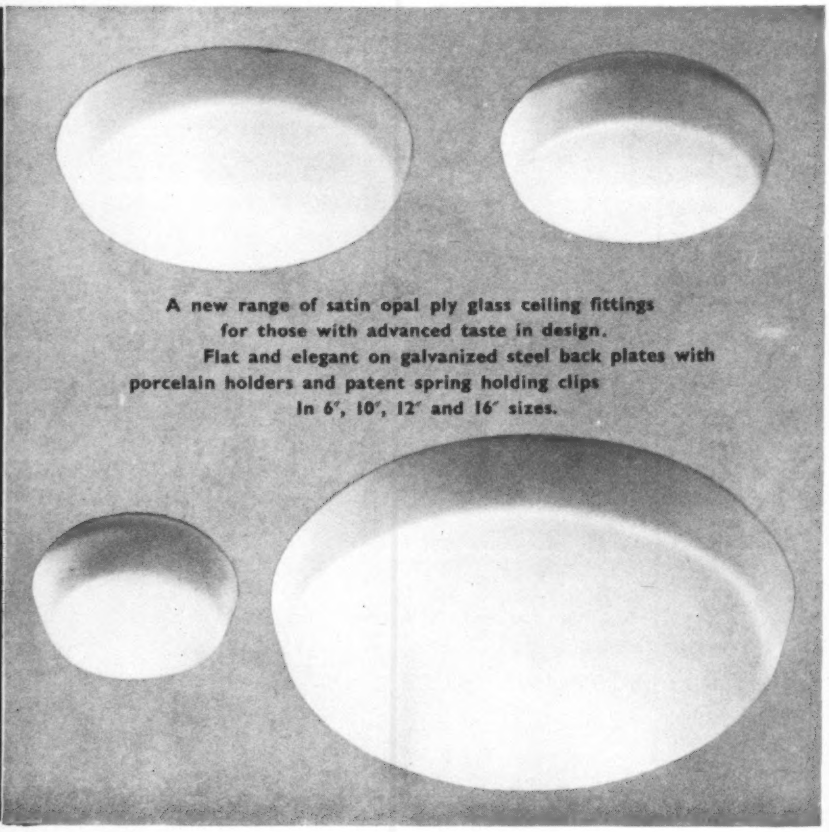

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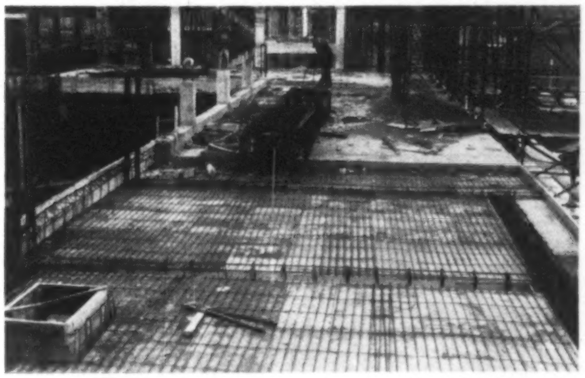

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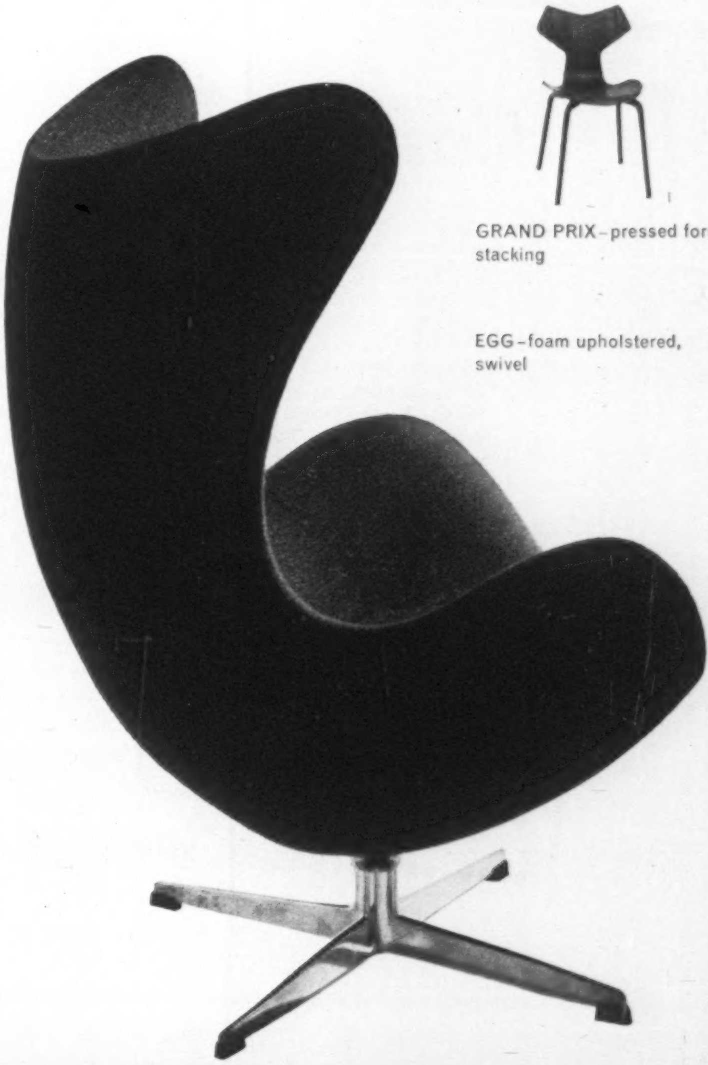

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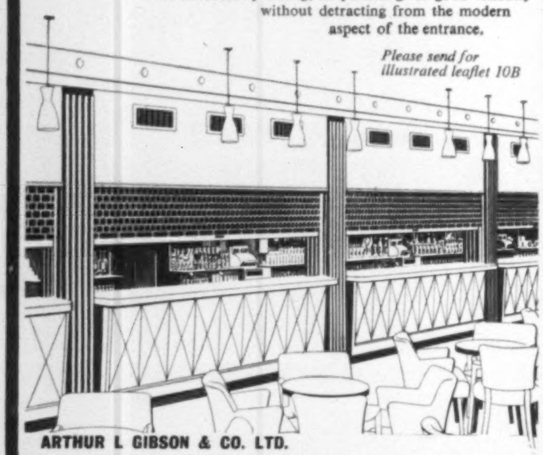

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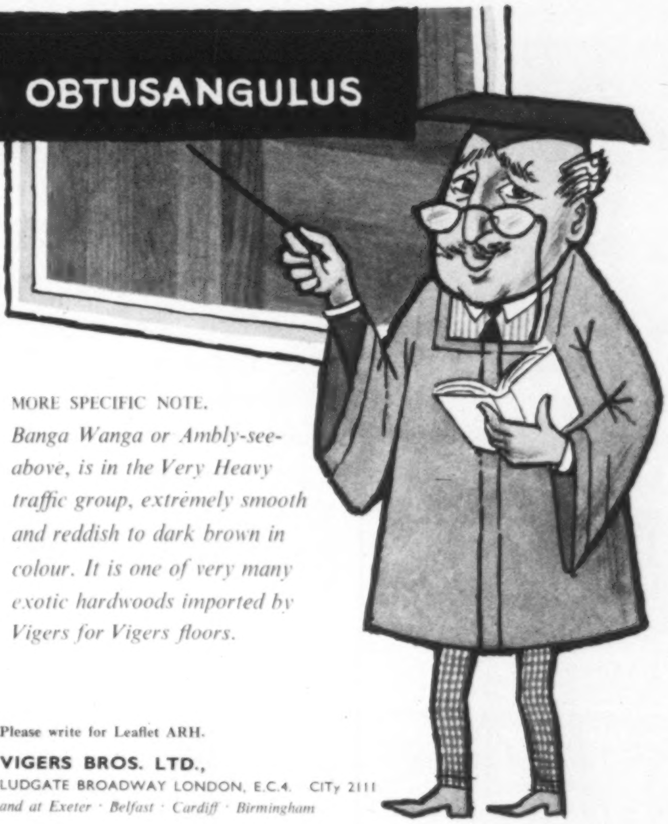

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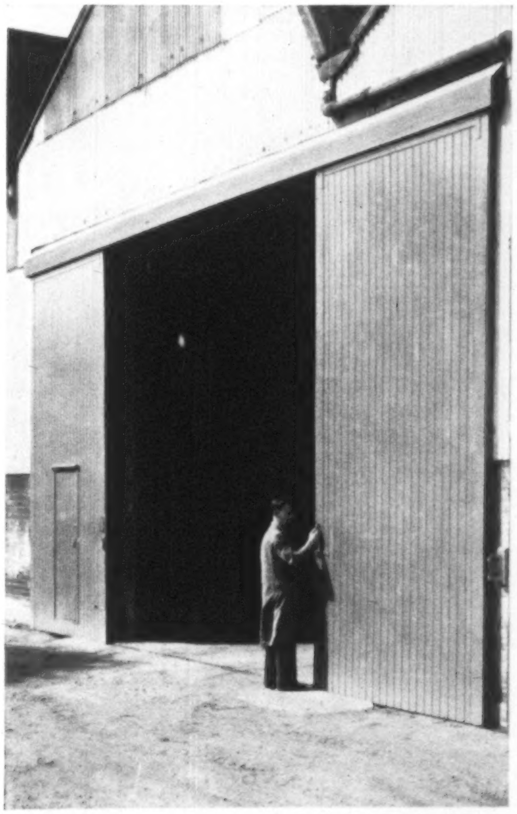

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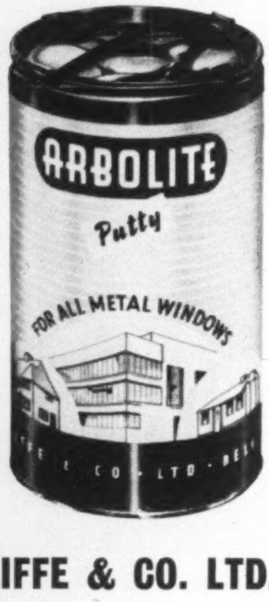

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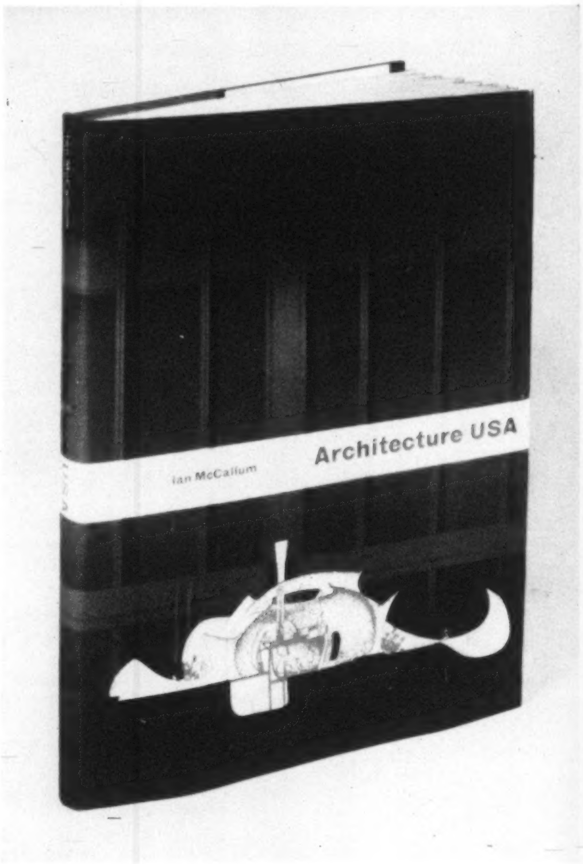

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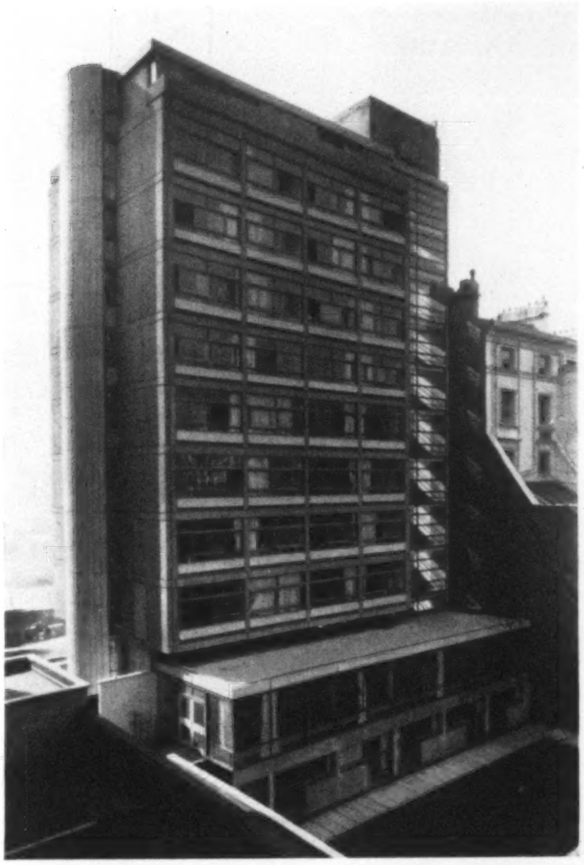

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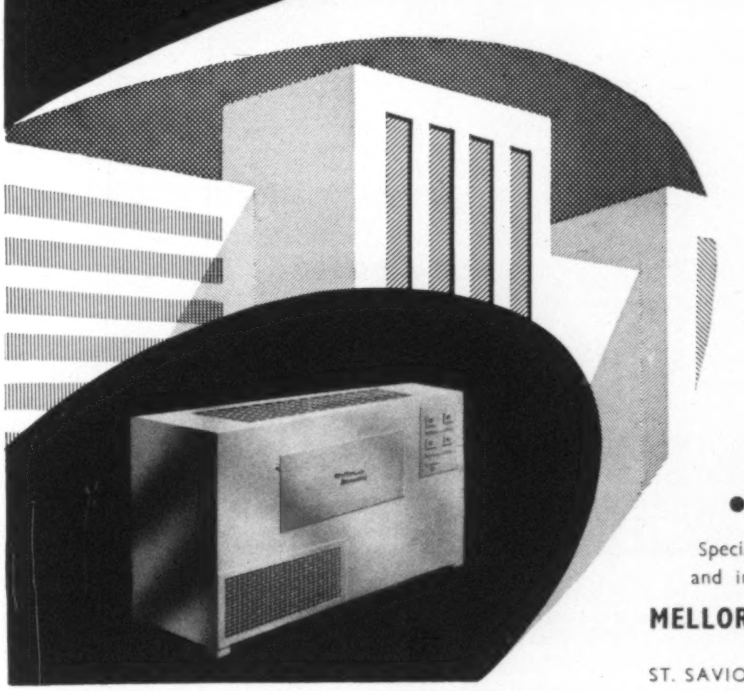

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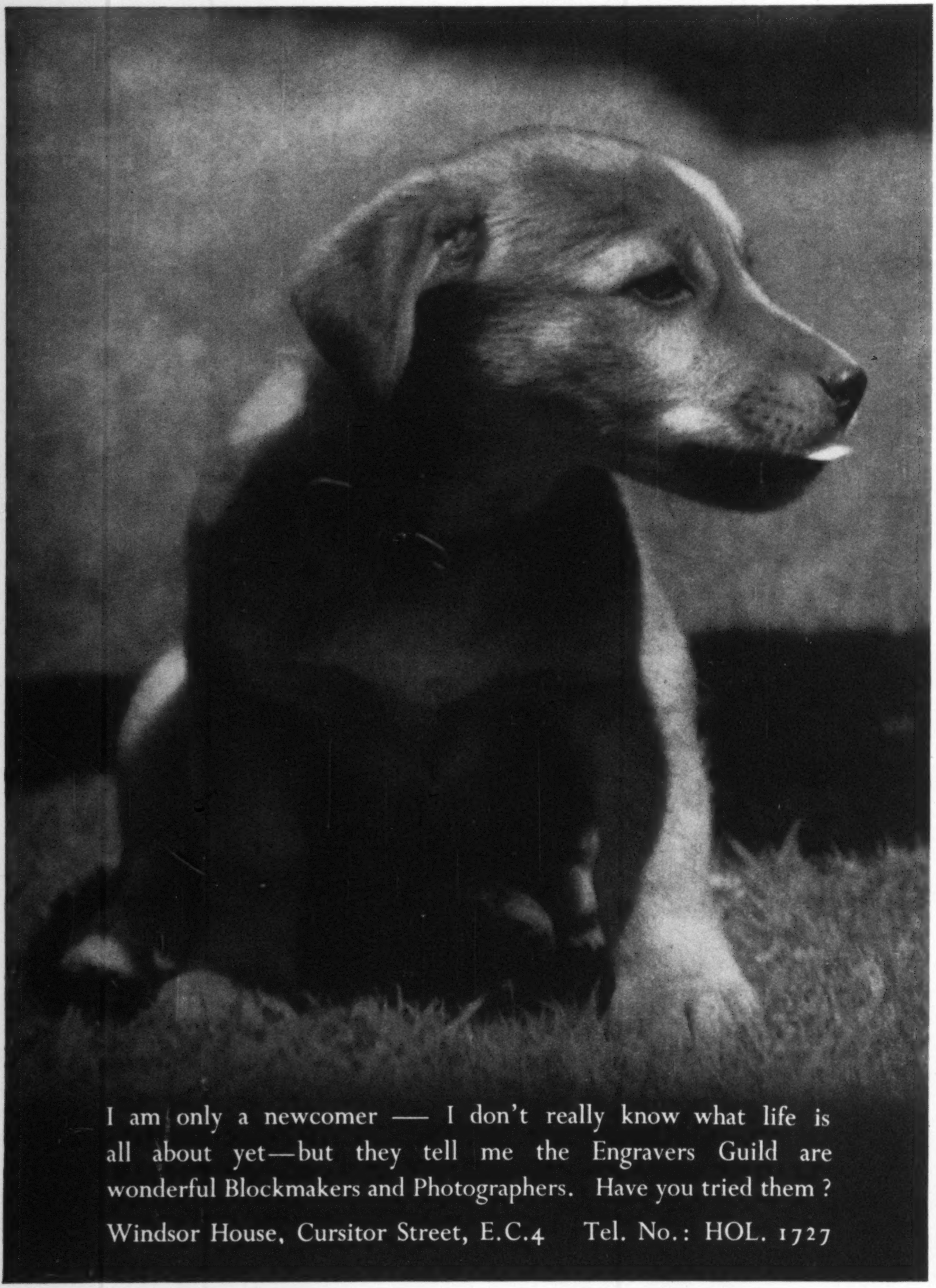

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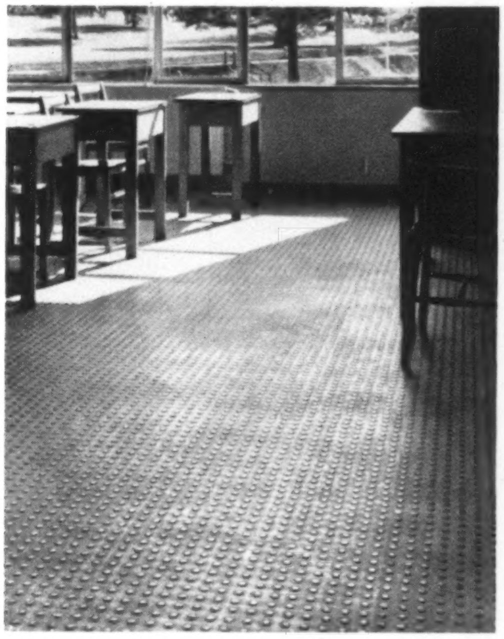

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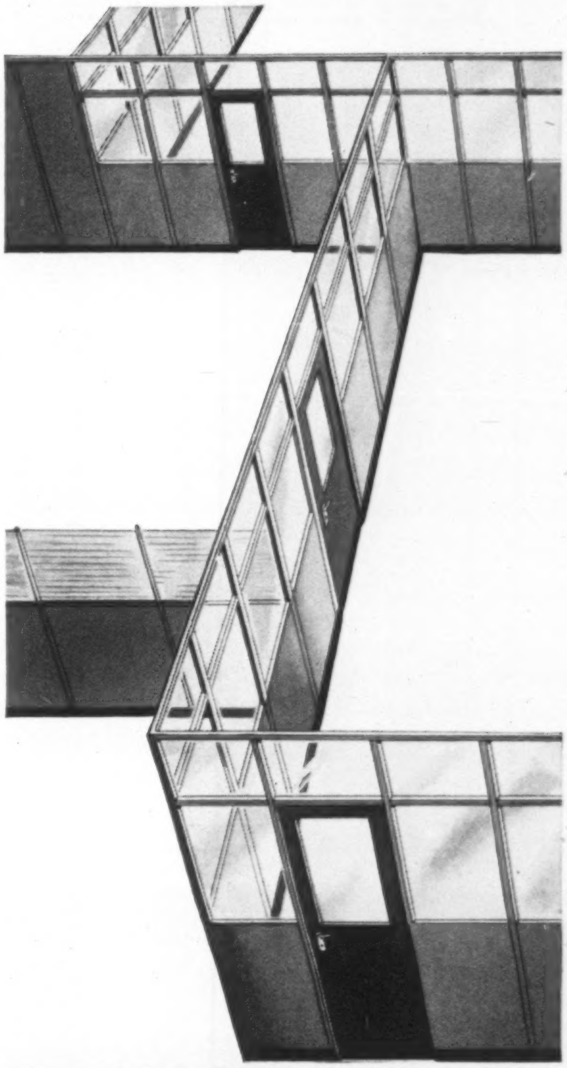

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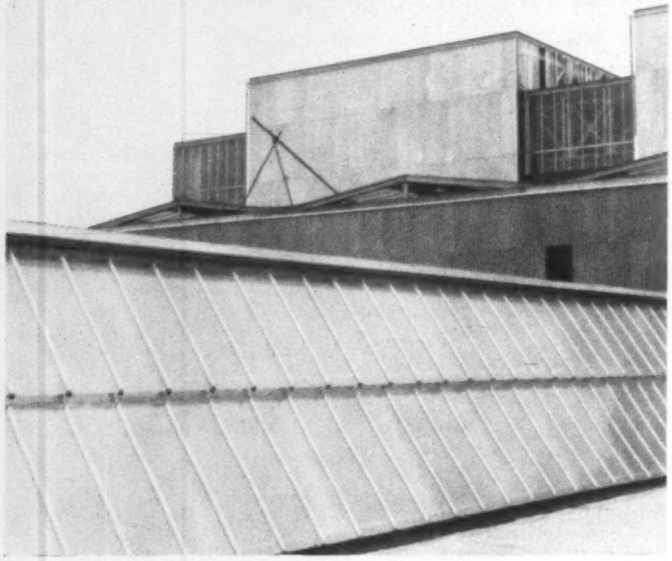

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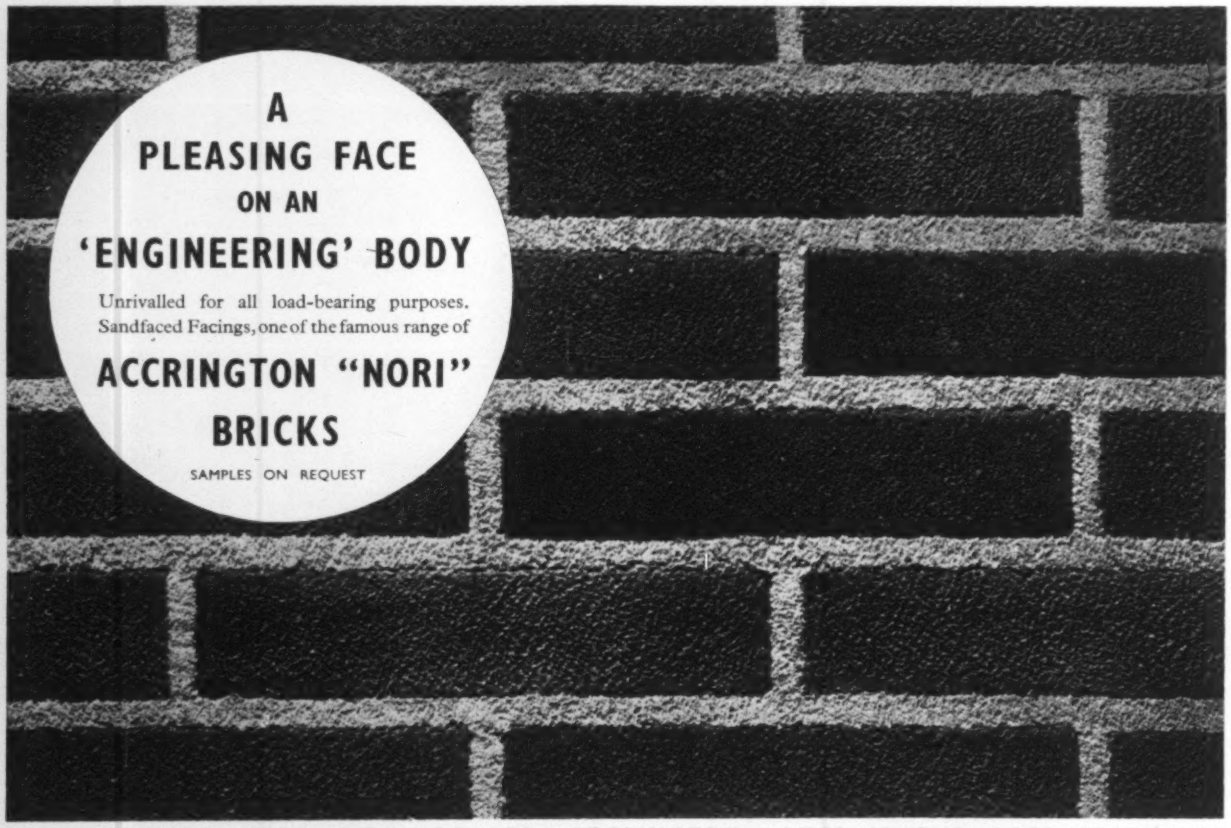

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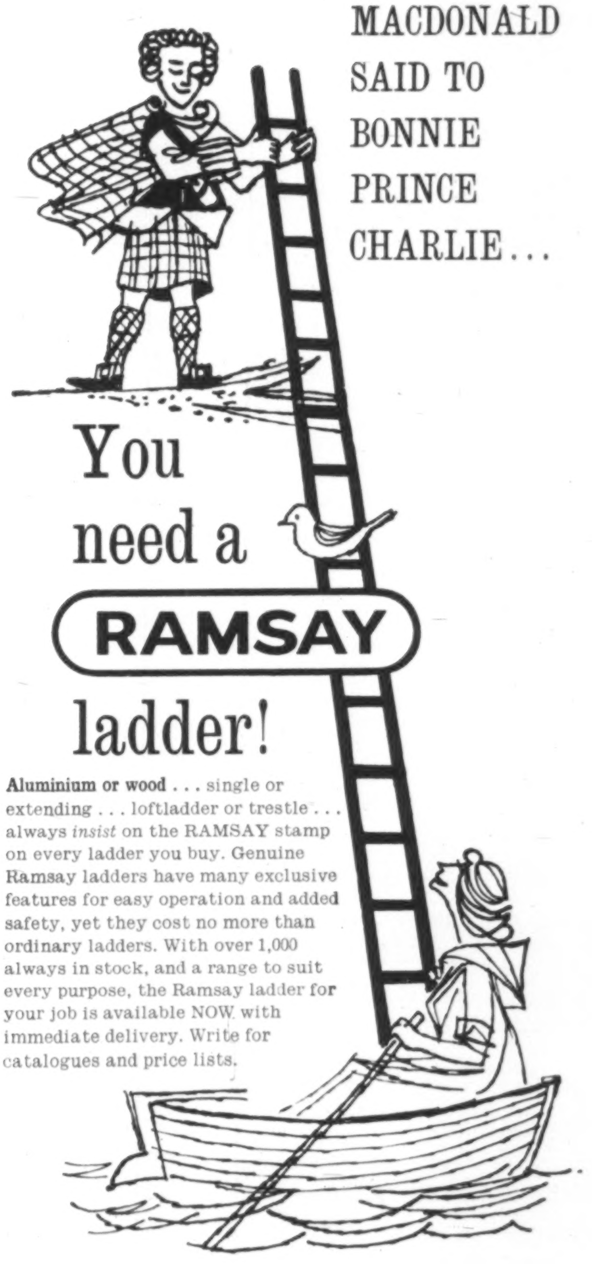

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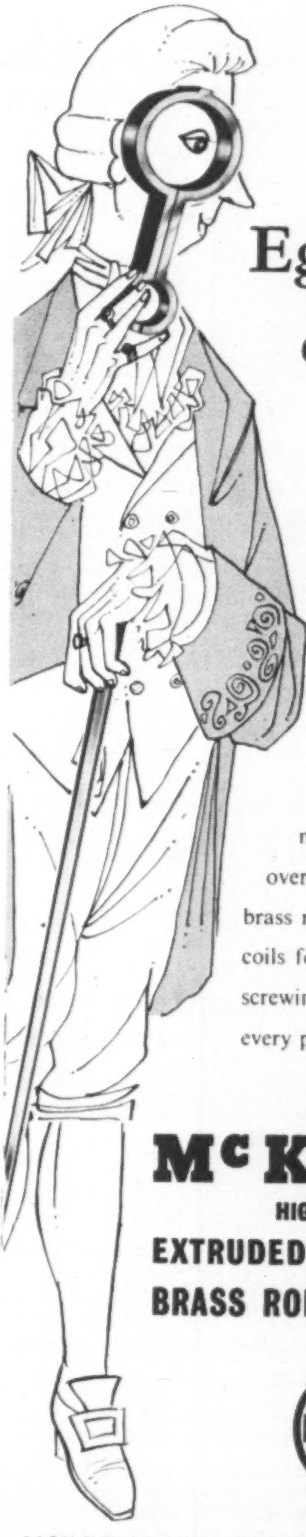

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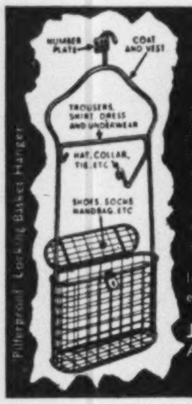
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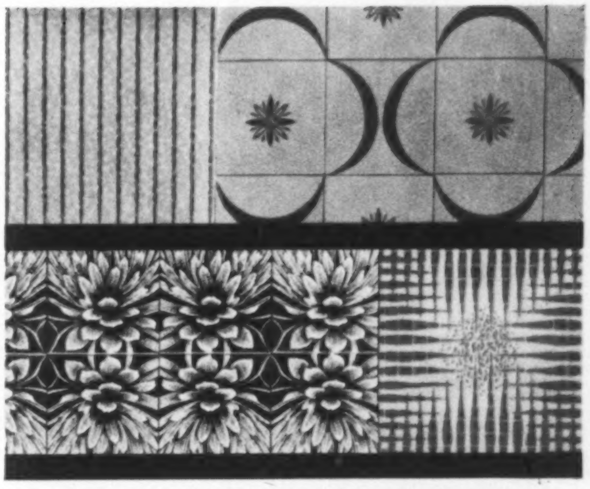

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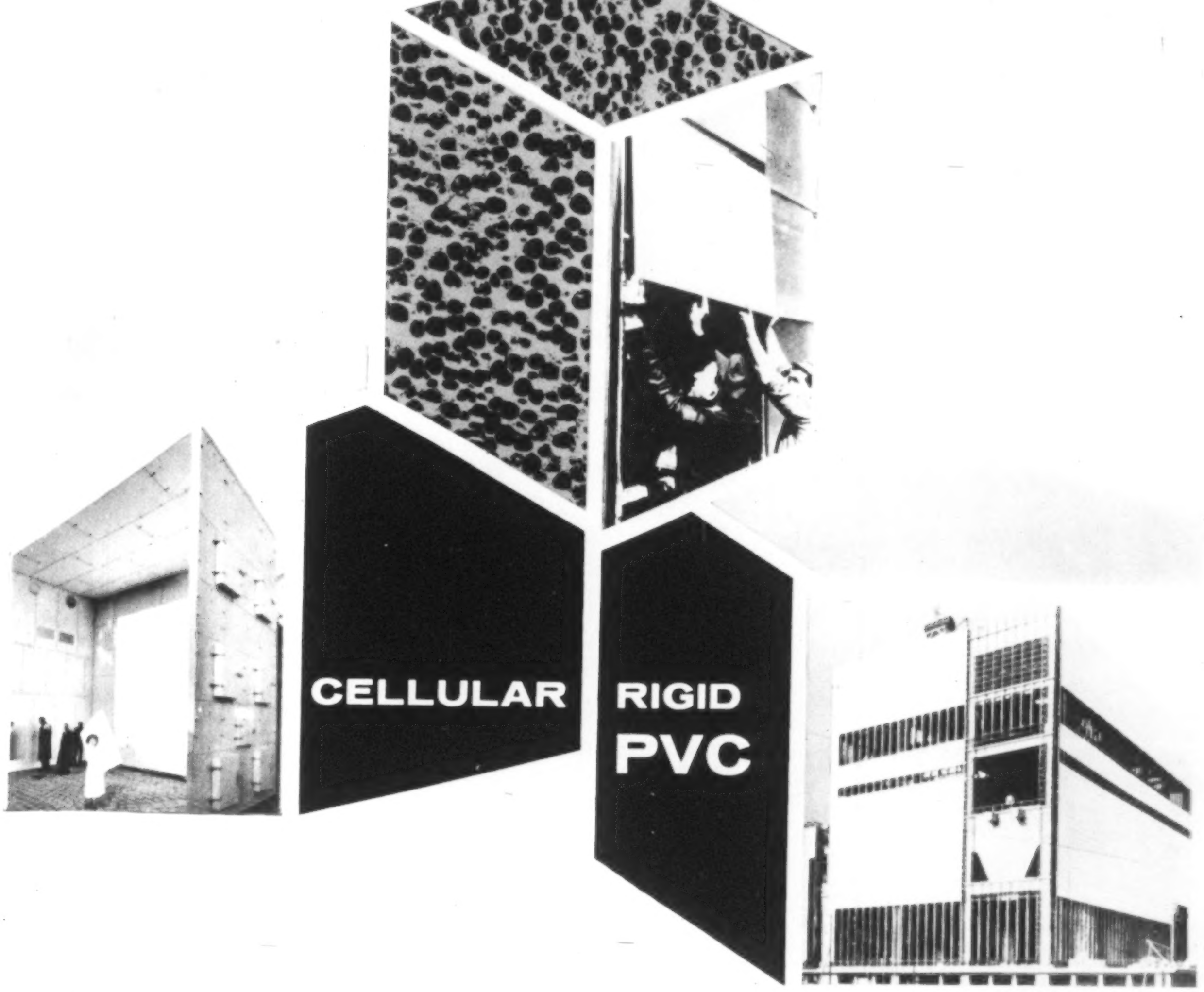

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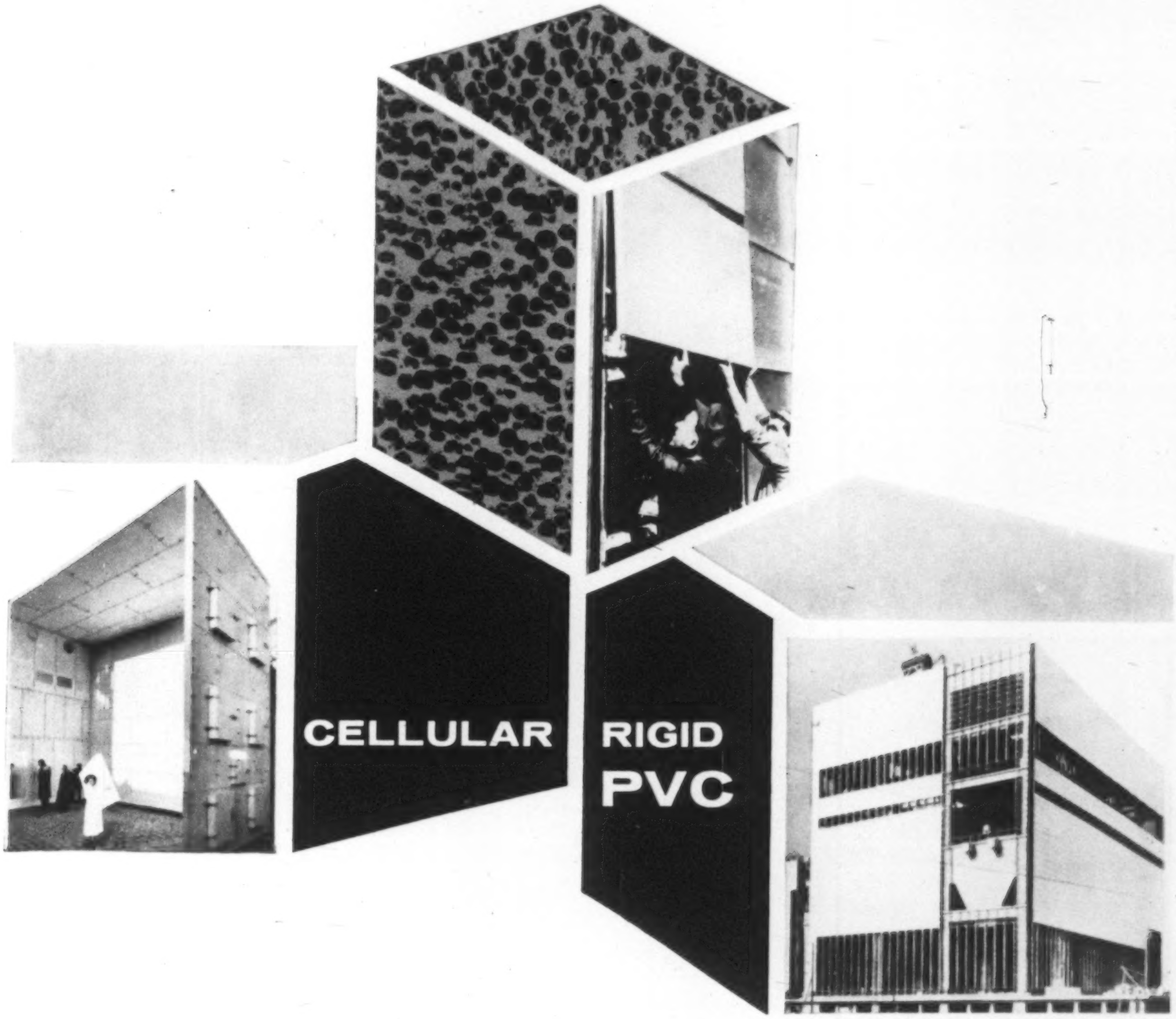

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